An Evidence Gap Map Shiny Application for Effect Size or Summary Level Data

Joshua R. Polanin, PhD | Principal Researcher | American Institutes for Research

Qi Zhang, PhD | Joe Taylor, PhD | Ryan Williams, PhD | Megha Joshi, PhD | Lauren Burr, MPP

Evidence Synthesis & Meta-Analysis in R Conference | February 2022

Sponsored by: Institute of Education Sciences (R305A180102) & Methods of Synthesis and Integration Center (MOSAIC) at AIR

Evidence Gap Map Resources

https://www.3ieimpact.org/evidence-hub/evidence-gap-maps

https://www.campbellcollaboration.org/evidence-gap-maps.html

Polanin et al. (*Under Review*). Evidence gap maps in education research. *Journal of Research on Educational Effectiveness.*
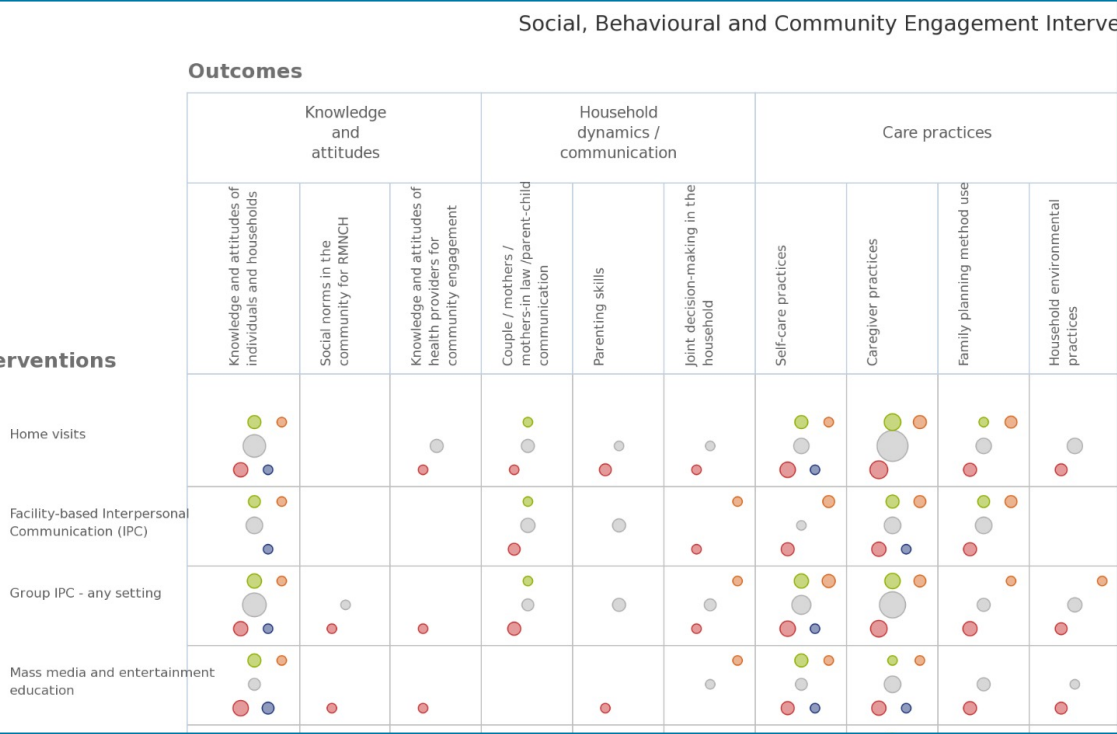
◆AIR®

Evidence Gap Maps

Social, Behavioural and Community Engagement Interventions for Reproductive, Maternal, Newborn, Child Health

Portela, A., Stevenson, J., Hinton, R., Emler, M., Tsoli, S., & Snilstveit, B. (2017). Social, behavioral, and community engagement interventions for reproductive, maternal, newborn, and child health: An evidence gap map. 3ie Evidence Gap Map Report 11. London, England: International Initiative for Impact Evaluation (3ie).
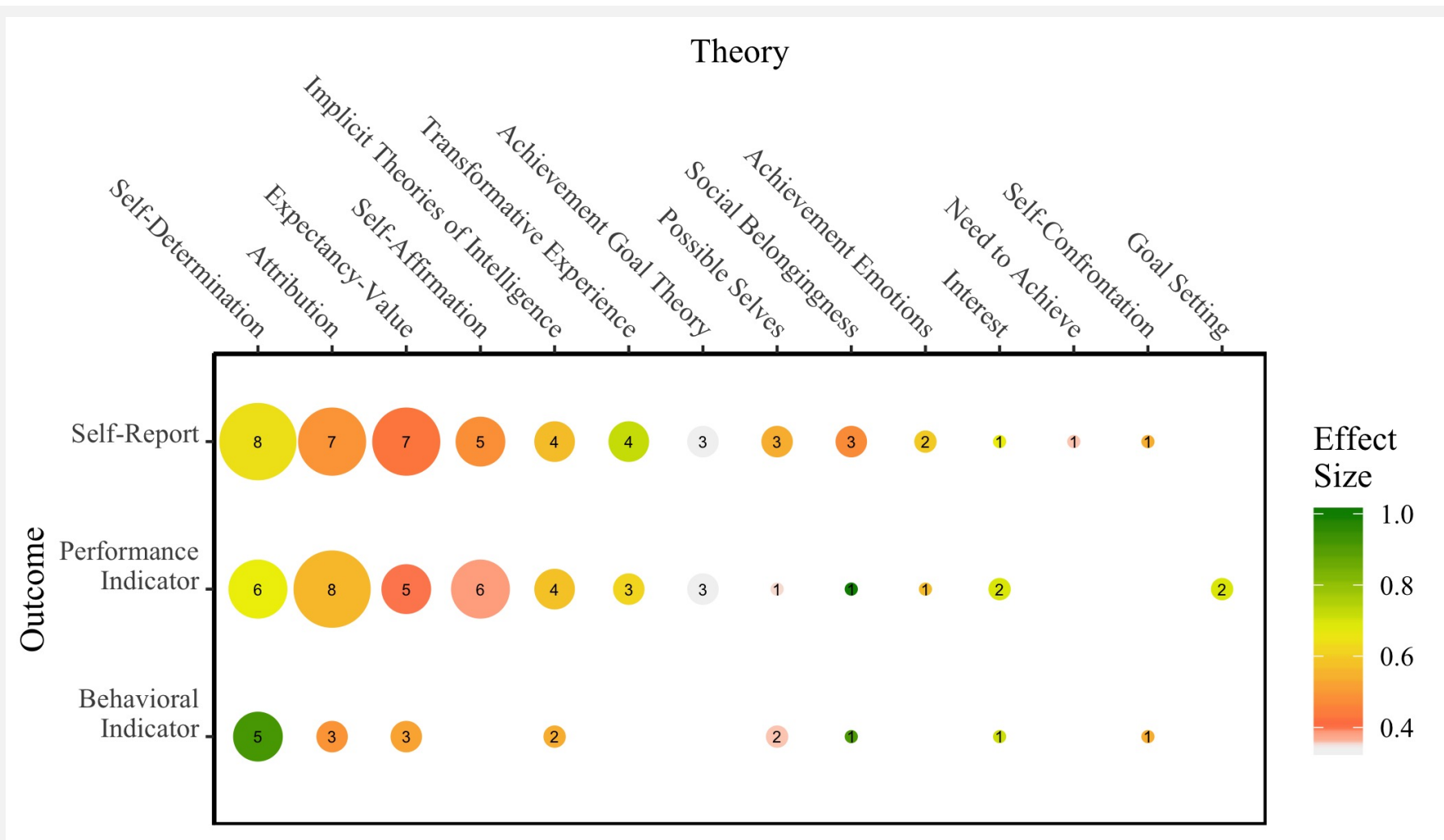
- Visualize where and how many studies (or effects) conducted

- Map characteristics on to diagram – usually intervention type and outcome type

- Blank cells ("gaps") as important as completed cells
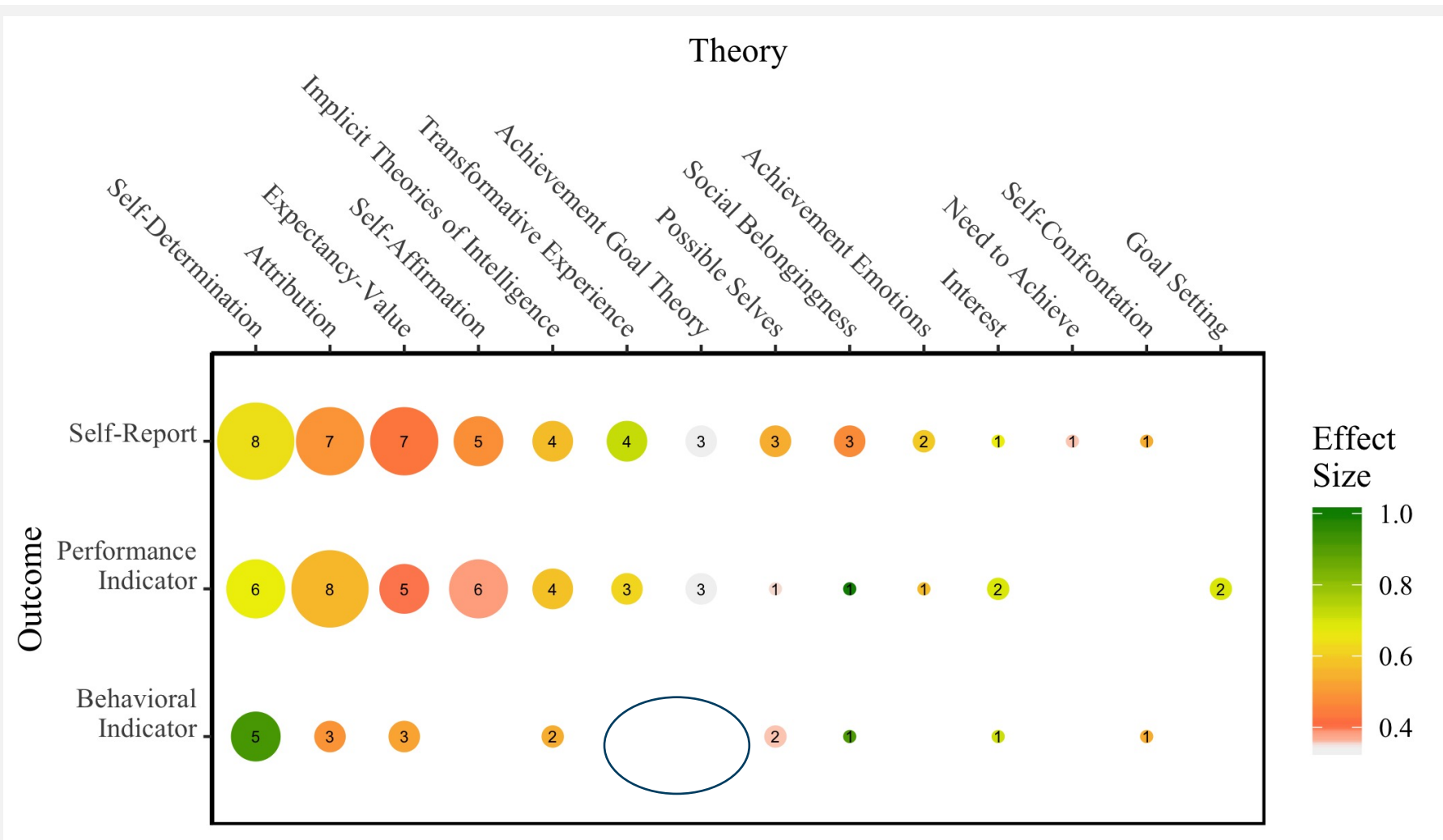
Evidence Gap Maps

Portela, A., Stevenson, J., Hinton, R., Emler, M., Tsoli, S., & Snilstveit, B. (2017). Social, behavioral, and community engagement interventions for reproductive, maternal, newborn, and child health: An evidence gap map. 3ie Evidence Gap Map Report 11. London, England: International Initiative for Impact Evaluation (3ie).

- Visualize where and how many studies (or effects) conducted

- Map characteristics on to diagram – usually intervention type and outcome type

- Blank cells ("gaps") as important as completed cells

AIR®

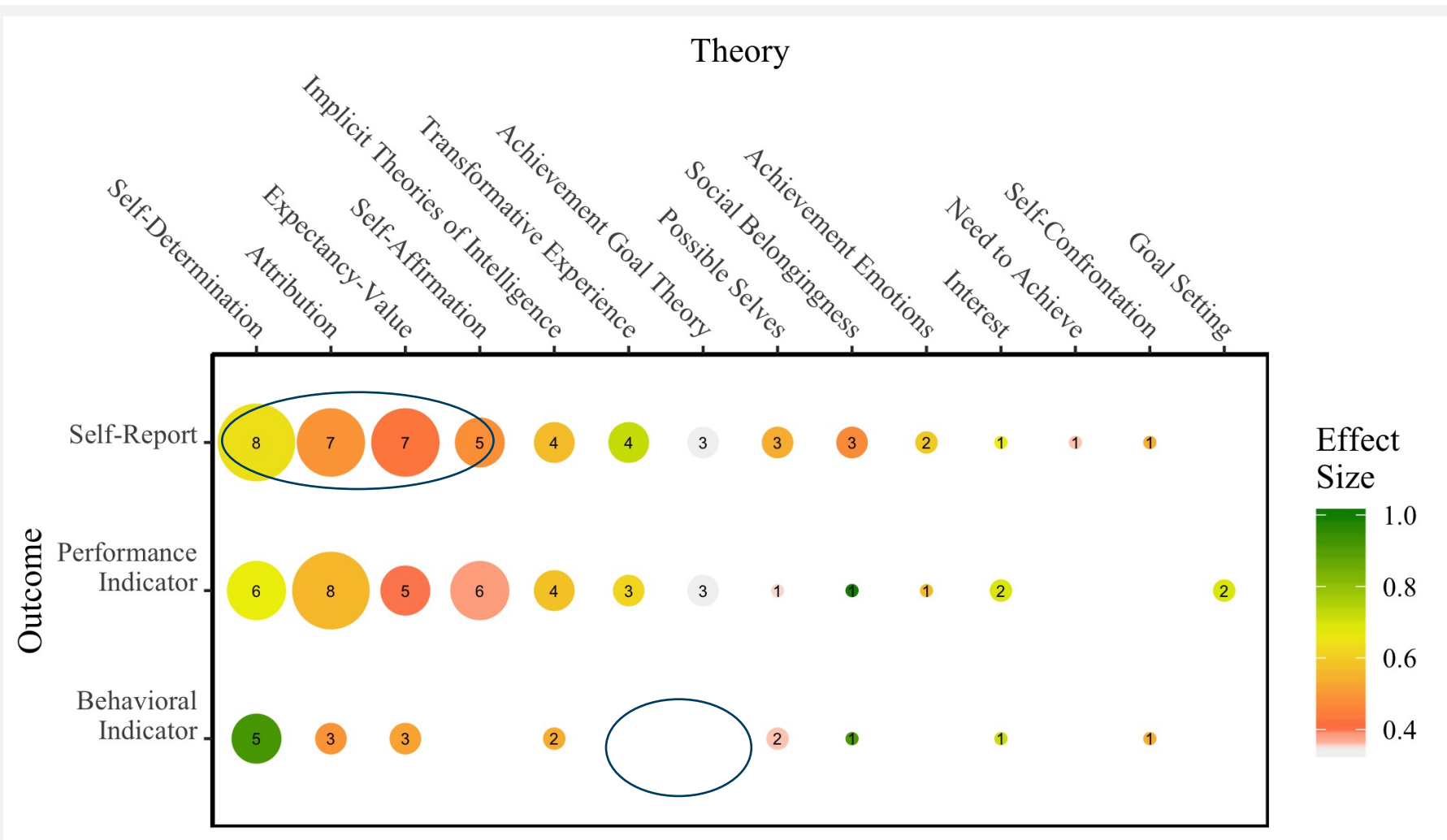# Evidence Gap Map with Meta-Analysis

Map from: Polanin et al. (*Under Review*). Understanding evidence gap maps in education research. *Journal of Research on Educational Effectiveness.*

Data from: Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational research*, *86*(2), 602-640.
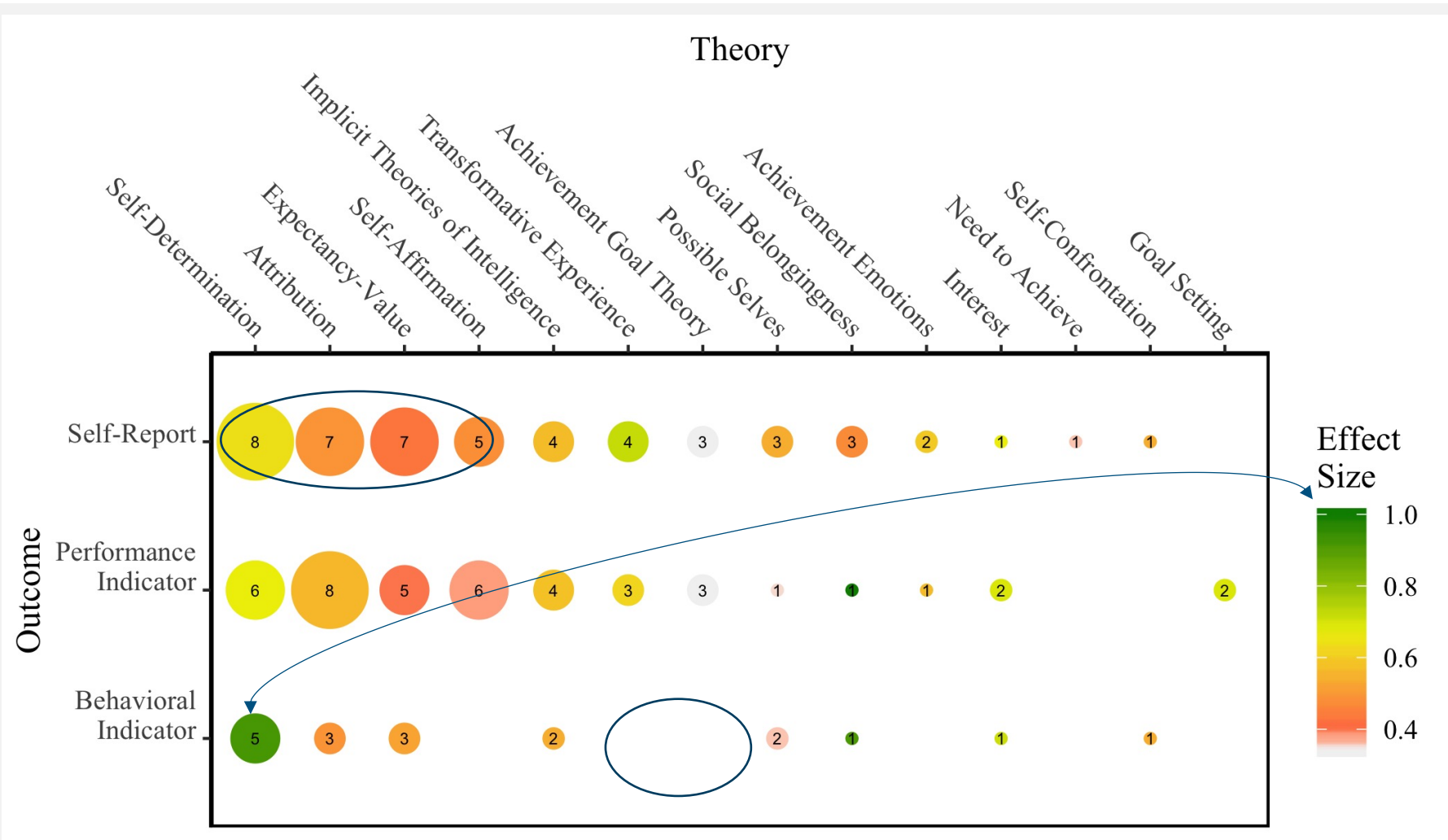
Evidence Gap Map with Meta-Analysis

Map from: Polanin et al. (*Under Review*). Understanding evidence gap maps in education research. *Journal of Research on Educational Effectiveness.*

Data from: Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational research*, *86*(2), 602-640.
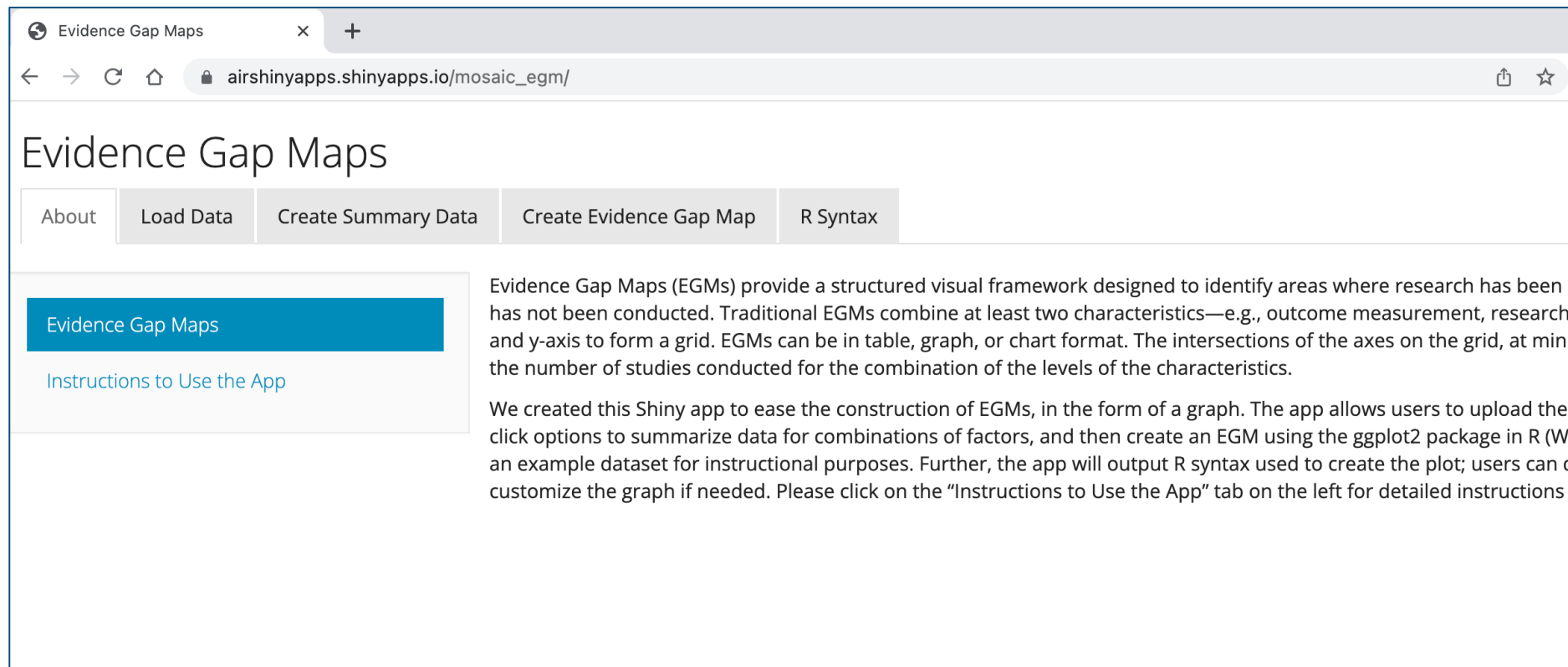
Evidence Gap Map with Meta-Analysis

Map from: Polanin et al. (*Under Review*). Understanding evidence gap maps in education research. *Journal of Research on Educational Effectiveness.*

Data from: Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational research*, *86*(2), 602-640.

Evidence Gap Map with Meta-Analysis

Map from: Polanin et al. (*Under Review*). Understanding evidence gap maps in education research. *Journal of Research on Educational Effectiveness.*

Data from: Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational research*, *86*(2), 602-640.

Creating an Evidence Gap Map with Meta-Analytic Data

Shiny App for EGMs

https://airshinyapps.shinyapps.io/mosaic_egm/

Philosophy & Basic Features

- Compatible with 'typical' meta-analytic datasets

- Easy to use for any analyst

- Upload effect or summary level dataset

- Two or three level EGM

- Summary output

- Easy to copy/paste R code

AIR®

Live Demonstration

- Example using effect size-level dataset

  - Effects of school-level programs on cyberbullying outcomes

- Example using summary-level dataset

  - Data comes from Lazowski, R. A., & Hulleman, C. S. (2016). Motivation interventions in education: A meta-analytic review. *Review of Educational research*, *86*(2), 602-640.

  - 14 different types of motivational interventions

  - 3 different outcome domains

AIR®

METHODS OF SYNTHESIS AND INTEGRATION CENTER AT AIR (MOSAIC)

Joshua R. Polanin

Principal Researcher
+1.202.403.5509
jpolanin@air.org

@jrpolanin
joshuarpolanin.com

AMERICAN INSTITUTES FOR RESEARCH® | AIR.ORG