



Graduate School of
EDUCATION



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Improvement Tool: Interrelationship Digraph

A convergent tool for dialogue that helps us determine which root causes are most important to address.

Click here for a [model](#) to unpack prior to engaging in the protocol.

Norms:

- **Avoid Solutionitis...** the goal is to understand the issue, not solve it (yet)
- **“Yes and”**... build on each other’s ideas instead of being overly attached to your own
- **Embrace “definitely incomplete; possibly incorrect”**... don’t let perfection get in the way of learning
- **Share the air...** step up, step back, invite others in

Roles:

- **Facilitator** who monitors times, walks people through the process, and helps uphold the norms.

Protocol:

Step 1: Write a problem statement OR the question “Why are we not at our aim yet?” at the top of the poster. Example Problem Statements:

- Too many students are chronically absent.
- Some students struggle in math and feel they cannot succeed.
- Not enough traditionally underrepresented students transition successfully to college.

Step 2: Identify 6-8 of the most significant causes contributing to this problem or not being at your aim yet. (Note: If you previously created a [fishbone diagram](#), the categories from your fishbone can serve as the causes. In this case, skip to step 3.)

Initial Brainstorm of Causes (2 min.)

Based on your work digging into the problem (i.e. empathy interviews, expert convenings, relevant data, research, etc.) and your own ideas/experiences, *individually brainstorm* 3-4 of the most significant causes contributing to the problem (ex. school-family communication, access to resources/support, instructional practices, time, etc.) on *individual post-its*.

Quick Share & Categorize (10 min)

The goal here is to quickly identify 6 - 8 causes contributing to the problem.

- *Share around & Cluster:* Each person shares one cause contributing to the problem. If others have a similar cause, group those post-its together. Continue to share until everyone’s ideas are out.
- *Select:* Identify the 6-8 most significant causes contributing to the problem and write them in a circle around the outer edge of the poster, like the numbers on a clock face.

Step 3: Make predictions (2 min.) Which cause do you think is most important? (You can share these now, or ask each person to write their prediction on a post-it and share them later.)

Step 4: Construct the Chart (15-20 min.)

Starting with one cause, for each pair of causes ask yourself:

- Is there a relationship between these two?
- If yes, which causes the other, *the most*? Draw an arrow from one to the other to show directionality.
 - For example, the facilitator may ask the group “Do instructional practices impact student effort, or visa versa?” If the group thinks instructional practices impact student effort more (than student effort influences instructional practices), draw the arrow going toward student effort (*from cause to effect*).
- You can decide there is not a causal relationship, but you must pick a direction if you do see a relationship. No lines with arrows at both ends!

Repeat until you have established a relationship (or not) between all the topics.

Tally (out, in) for each cause.

- ***The root causes with the most outgoing lines most impact the issue/problem. Star the top 1-2 root causes!*** The root causes with the most ingoing lines tend to be the symptoms of the causes, and how they manifest.

**EQUITY
PAUSE**



*Take a moment to consider: Where are we making assumptions, engaging in deficit thinking, or focusing on external forces beyond your control? **If we take those causes out of the equation, what is within our control to improve?** For example, causes like “unengaged families” or “unmotivated students” are usually assumptions or symptoms. For causes like these, ask yourselves “**Could it be instead...?**” to surface alternative explanations within your control. You might assume families are unengaged, but the real culprit may be ineffective home-school communication. You might assume students are unmotivated, but the real issue may be instructional practices or not feeling like they belong. **For improvers, drilling down to what is within your locus of control is empowering. You have agency and can make a difference!***

Step 5: Predictions, Revisions & Implications (5-10 min.) Share predictions and discuss the following:

- **Predictions:** Were our predictions correct? What root cause(s) have we learned are at the heart of the problem?
- **Revisions:** Are there revisions we need to make to our chart based on the equity pause above? Make revisions as needed.
- **Implications:** What will we do now to *move forward* and *learn from those we serve*? What have we tried already to address the most significant root causes - and what are the *successes* and *challenges* we’ve experienced?

This protocol has been created by the High Tech High GSE Center for Research on Equity and Innovation.