



Activity: Developing Your Understanding of the Problem with a Fishbone Diagram (60 minutes)



OVERVIEW

Developing a shared understanding of the problem a team aims to solve is a critical step in a cycle of learning. Since many of the most intractable problems facing educators are complex and have many root causes, effective solutions should be based in an understanding of these. This activity produces a fishbone diagram, which is a map of the problem and its components. This diagram is a living document that supports the learning cycles team through the cycles of learning by serving as a reference that the team can return to and update throughout the improvement process.

OBJECTIVE

Through a guided session of brainstorming and sharing, participants will create a diagram of the root causes of their identified problem.

NUMBER OF PARTICIPANTS

- Groups of approximately six to eight participants.
- One facilitator
- One recorder

MATERIALS

- Markers
- Sticky notes
- Space for sorting ideas (chart paper, a white board, or six blank sheets of paper; see the template below for sorting diagram for ideas about how to arrange the room)
- Solutions Parking Lot (below)
- Copies of the [Framework for Great Schools](#)

CONNECTED ACTIVITIES

To engage in this activity teams must have settled on a clearly defined problem to address. If a problem has not yet been chosen, please see:

- [Conducting a Needs Assessment](#)
- [Establishing Goals Aligned to the Framework for Great Schools](#)
- [Guiding Questions for Step 2: Assessing Needs and Establishing Goals through the Lens of the Framework for Great Schools](#)

GUIDING QUESTIONS

- What are the different causes of the problem my team is aiming to solve together?
- How can we break down larger problems into more manageable pieces?
- How do the causes of the problem connect to our school practice?

FACILITATION NOTES

1. Introduction and framing (3 minutes)

- Welcome participants and review the objective and guiding questions of the activity.
- Remind participants that this activity is built around open discussion of a problem they all face, and trust is a key ingredient in the process. To get the most from the activity, everyone must feel safe to express his or her opinion. The goal of the discussion is not to focus on individual practice, but to understand the full complexity of a particular problem facing the team and the many ways that it might be addressed.
- Explain that this activity is part of a larger process that leaves deciding on solutions to the problem to a later step. The benefit of this activity is the sustained focus on the problem before solutions are introduced. It is natural and unavoidable that when a problem they know well is discussed, solutions will arise. Tell them that when that happens, the solution ideas will be written down by the recorder in the Solutions Parking Lot (below) so that they can be revisited later.

2. Problem Check (5 minutes)

- Explain that since this activity is based around a problem, they are going to do a brief check of their problem statement. In order to identify a problem, teams will focus in on an area of practice to be strengthened through the goals established for the year (for guidance on identifying these areas, see the [conducting a needs assessment](#) and [establishing goals aligned to the Framework for Great Schools](#) activity). Ask participants to discuss:
 - Is there consensus among all participants that the problem is important?
 - Does the problem deeply connect to a goal established for the year?
 - Is it grounded in observable practice?
 - Is it specific enough that it can be measured?
 - E.g. low homework completion is sufficiently specific, while low perceived student effort during instructional time is too broad and vague. Similarly, high rates of disciplinary referrals is a better problem statement than student misbehavior.

3. Brainstorm Causes (10 minutes)

- Tell participant they are going to brainstorm all the possible causes for this problem. The goal of this part of the activity is to write down three to five thoughts about why this problem exists. Focus on describing the existing system that creates the problem, rather than an idealized view of how the system ought to work.
 - Hand out sticky notes to each participant (including the facilitator and recorder)
 - Remind them that each sticky note should contain only one cause.
- After approximately five minutes of brainstorming or after the pace of writing slows, present the participants with a copy of the [Framework for Great Schools](#). Remind them that a problem may be connected to multiple elements and ask them to think about any of the six elements that may be missing from the causes they have written. Ask them to spend another 2-3 minutes using the *Framework* elements to write additional causes in any areas they might not have thought of.

4. Share (25 minutes)

- Tell participants that they are going to share their brainstormed causes with the group.
- Remind them that the focus of this part of the discussion is the causes of the problem, not solutions, and when they hear a solution they should call it out for the recorder to write down in the Solutions Parking Lot (below).
- Ask for a volunteer to read a single cause out loud, and hand the note to the recorder, who will place it on the diagram. Ask if other participants wrote similar causes, and have them read and give the note to

the recorder to create a cluster of similar ideas. When a cluster is complete, ask another participant to share another cause and repeat the process.

- **Note:** As participants continue to share in this manner, allow the recorder to lead participants as they relate similar ideas and sort the causes into clusters on the diagram. The facilitator should listen for the following common occurrences and provide guidance to participants. Continue until all the causes are charted.
 - *Guidance for locus of control:* when a participant shares a cause that isn't within the school's locus of control, ask them to rephrase it so that it is connected to an impact within school. For example, if a participant mentions: "families that don't talk about college," you might ask them to rephrase it to directly connect it to the problem. Changing the cause to: "students don't expect to attend college," or "students don't know what is required to get into college" are more specific and more actionable because they are now within the locus of control of the school.
 - *Guidance for causes that include solutions:* if a cause is written in a way that directly implies a specific solution, ask the participants to rephrase it so that the cause is focused solely on the problem. For example, "there isn't enough ESL support staff for our ELL population," could be restated as: "ELL students have difficulty with academic language."
 - *Guidance for diving deeper:* if one of the causes seems very large or broad, tell participants that deeper understanding is more useful than broad and ask the group "why?" repeatedly until they arrive at a level of depth that connects the cause to school practice. Be ready to catch participants if the answer to a "why?" takes the cause outside of the locus of control. (for additional support on diving deeper into root causes, see the guidance in the [Five Whys protocol](#))

5. Refine Diagram (15 minutes)

- Remind participants that the fishbone is a living document that can and should be revised over time as they continue to deepen their understanding of the systemic causes of the problem. It is expected that the first iteration of the fishbone will be incomplete, and participants should feel comfortable questioning and adding to it as they learn. However, to summarize the work of this session and to enable the school community to use the fishbone diagram in its work, the next step of the process is to look over the ideas and collectively settle on a finished working copy of the diagram.
- Ask participants to look over the clusters and lead them through a naming of each category. As they work to attach names to each cluster, they may find that some causes may need to be split into pieces or consolidated. To make the diagram as clear as possible it may be helpful to settle on six root causes or fewer for each cluster. Use the following guiding questions to guide you:
 - Will breaking this cause into components further clarify how the system behind the problem functions?
 - Are these separate concepts? If we combine them is any understanding lost?
 - Is this cause in our locus of control? If not, how does it connect to a school practice we can control?
- As participants make progress refining the diagram, ask the recorder to take a blank paper or fishbone template. Help the group agree upon language so the recorder can write down the changes on the final clean version of the diagram.
- Thank the participants for their time and effort. Thank the recorder for assisting with the production of the completed fishbone diagram.

6. Next Steps (2 minutes)

- Within the next 48 hours, while the memory of the activity is still fresh, either the recorder or facilitator can complete a new copy of the fishbone diagram using the provided template (below). The solutions parking lot document should be saved for subsequent meetings.
- Turn your understanding of the problem into an action plan using the [Planning a High-Leverage Change activity](#).

Fishbone Brainstorming Template

Theme name:

Theme name:

Theme name:

Theme name:

Theme name:

Theme name:

Fishbone Template



