Define Your Issue and System

Part 1: Identify and Define Your Issue

Identify a challenge or something you would like to improve. For example, you might want to increase recycling in your neighborhood, improve student retention, or help your organization become more functional.

Begin by defining the issue and developing a vision of how it could be better. Even a very simple vision can guide our actions. For instance, "We want to increase the number of households recycling and amount they recycle." Another example: "We want to reduce dropout rates at high schools in our city."

Part 2: Diagram the System

1. List Parts and Interconnections

List the parts and interconnections in your system (for example, elements that impact student retention). Because everything is connected to everything else and this is too much to think about, focus on the function or purpose of your issue to help you decide which parts to include. This allows you to create a **system of interest**.

2. Notice How the System Operates Over Time

- **Flows**

  As you form your system of interest, notice what flows in and what flows out. A complex system is a dynamic process that is constantly changing. Flows show us how systems change or stay the same, for example, students enrolling and graduating or dropping out.

- **Feedback**

  Notice what feedback loops are currently operating. What is guaranteed to continue, given the way the system is currently set up? For instance, a program without enough funding might not produce results that attract funding in the future.

- **Delays and Repetition**

  Look for **delays**, like when you turn on the faucet but it takes a while for hot water to reach the tub. Or like when you start working out today, but won't see the effects for two months or more.

  Also look for **repetition**. One person walking on stone stairs doesn't appear to have any effect on the stairs, but a lot of foot traffic on stone stairs over time and they become worn away.

3. Investigate Boundaries

Identify boundaries. Consider all elements that contribute to the function of the system. For example, to increase student retention, you might need to consider not only the student, but also the teacher, school, school district, and parental involvement.

4. Notice Self-Organization and Emergent Properties

When you want to diagram the self-organization and emergent property aspects of a system, it is important to pause and really "listen." What behaviors occur simply by the different parts of the system responding to each other, rather than by intention or design? For example, what is the state of the culture at any given organization?

5. Investigate System Levels:

- **Dependence and Coherence**

  Look at the subsystems to see if they are disturbing the overall coherence and functioning of the system. Notice what your system of interest is dependent upon.
  a. What larger system is it part of?
  b. Are there subsystems inside your system?

- **Depth Perception**

  Depth perception helps you see all aspects of the system, so you don't propose solutions that work at one level, but not the others. Look both at a "top" or "20,000-foot" view and a close-up view. For example, consider the perspective of the student as well as the city he or she lives in.

6. Consider Resilience

Investigate if your system of interest has reserves, redundancy, or diversity that allow it to survive if there are challenges. For example, student retention might be increased if there is diversity in instructional methods, offering different ways to learn the same content.

7. Notice the Qualitative of Participation:

- **Aesthetics**

  People are moved by feeling and aesthetics, not merely by numbers and parts.

For instance, if you are concerned about teenagers dropping out of school, in addition to the items we mentioned earlier, you should also consider if the school is a pleasant place to be, or is it a cinderblock nightmare with no windows that reminds people of a prison?

How do we see?
Notice that all the "connected things" you see are actually part of a single unity, without separation, in which all these things exist. When we fall into seeing the system as an aspect of a single unity, we make connections that we might not make otherwise. Use this intuitive mode of seeing to complement your intellect and to bring you from observer to participant.

Seeing together
When a group goes through a process of seeing the unity of the system together, the results can be extremely effective. We tend to see systems from the outside, objective to ourselves. But when we consider a system thoroughly and allow ourselves to feel the deep implications of how the system functions, it is possible to experience a whole that includes ourselves.

By Dylan Skybrook, MSc.