A Process for Solving Complex Problems

Sometimes groups get stuck in problems that seem so complex and overwhelming that it's difficult to see through to a Level 3 fix that will truly resolve difficulties. Here's a 4-step process for breaking through the gridlock of a complex problem:

1. **Identify the Original Problem Symptom**
   - Hold a forum or series of focus groups and/or interviews to get more data from a large group of stakeholders. Questions might include:
     - How are you experiencing the problem now?
     - How does it impact your work?
     - How does it impact students and families?
     - How does it impact others? What is your desired state?
   - Try not to focus on just a single event. Look back over time and identify a class of symptoms that have been recurring. Use the Historygram process to identify key events in the progress of the problem, with general time frames when each event occurred. Looking at the events over time can expose patterns and trends, leading to greater understanding.
   - Whose interests are being served by the way things are? This is a very difficult question for people to answer when their interests are the ones being served! It might be useful to invite friendly observers who are knowledgeable about the system and problem to give their objective feedback.
   - What information do you have or need to have that has importance to the problem? What do you need to know? How can you find this out? Don't overload yourself with irrelevant data. Prioritize your need to know, always asking, "How will knowing this help us solve the problem? What will we do with the information we get?"

2. **Map Out all the Quick Fixes (Level 1 Actions Taken in the Past)**
   Use feedback loops to map out all the fixes that have been used in the past to address the identified problem. You are looking for the balancing loops that preserve the problems by keeping them in control. (Perhaps if the problems were out of control, there would be more impetus for finding permanent solutions.)

3. **Identify the Impact**

   Look for ways that past solutions affected the organization — especially unanticipated effects that locked people into patterned responses. Examine the side effects of quick fixes from the perspective of all the players in the system.

4. **Identify Fundamental Solutions**

   By now, you have defined the problem clearly, carefully, and fully and it's time to decide whether you have enough information to identify and select potential solutions or to go deeper into root cause analysis. If you decide you know enough to develop solutions, be sure the selected options address the problem from everyone's perspective.

An Example of Breaking Through

A registration and enrollment team found themselves stuck in the complexity of the problems they encountered. The net effect of all the problems was that students were getting lost in the system.

The team reviewed the problem more holistically and discovered that a multitude of mini-processes had sprung up at each school to address the very diverse registration needs of different populations of students (English as a second language, special education, homeless, etc.). The process was further complicated by the fact that there was no electronic data entry at the school sites where students were registering, causing the whole system to operate manually, slowly, and with errors and duplication.

After looking carefully at all the fixes that had been put in place (the group flowcharted the myriad ways students register), the group decided that a central registration site was the best solution. They surmised that the resulting standardization would make all the processes run more smoothly, and the one-stop-shop location would make it easier on families.

The team piloted the system in one section of their district, gathering feedback from the families and other stakeholders, and monitoring cycle time and errors before implementing the fix.

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