Lesson Seven

Solving Problems

While the Three Person Solution solves the problem of the relational dilemma, it does not automatically solve the problems that can arise in any given context where Threeing is introduced. However, Threeing can be used to organize a collaborative approach to solving such problems as well as to solving problems in general. In this lesson, team members use their second skill set to identify and describe the problems they foresee in applying the three person solution to their context. Team members then use their first skill set to think of analogies for the problem. The third skill set is used to apply the analogies to the problem. This approach to problem solving is adapted for *Threeing* from Bill Gordon's work on creative problem solving and presented in terms of the three skill sets. (William Gordon, *The New Art of the Possible, The Basic Course in Symectics*, "Cambridge, Mass., Poise, 1987) Gordon was part of an Allied Team assigned to clear Tripoli Harbor during World War II when he first saw this strategy used.

Stating the problem, Second Skill Set:

The German Navy had scuttled a bunch of ships to block the harbor at Tripoli with explosions that blew holes in the hulls of the ships. They then used iron plates to jam the holes they blew open in the ships so the Allies could not repair the holes, surface the ships and float them away to where they would not from block the harbor.

Finding an analogy for the problem, First Skill Set:

A British colonel listened to the problem and said, "Interesting paradox. Here we have a ship built to travel great distance and we can't move it a few feet. When my mother rakes out her walled in garden in the middle of London she always ends up with a few mounds of dirt. She can't throw the dirt over the wall so...

Identifying the aspect of the analogy that can be applied to the problem, Third Skill Set:

...she just rakes and rakes until the dirt gets spread around evenly. We'll blast the ships with small charges and then rake the debris until we can get our ships into the harbor".

The formula Gordon distilled from this experience is as follows:

Find the paradox in your problem.

> By definition, a problem represents conflict. By looking for the paradox you get to the core of the problem. (A paradox is a statement that is *seemingly* contradictory.) Example: problem is to develop a new bandage. Paradox in conventional bandages is

that although they protect the wound from germs they interrupt the natural healing flow of the body. Therefore we can say that the paradox is the "wounding bandage". Finding the paradox involves describing the specifics of the problem so it can be seen, the second skill set.

Find an analogy that reflects the essence of the problem. (Analogy is the inference that if two things agree with one another in some respects they will probably agree in other respects.)

Analogous to a cut in the skin is a cut electrical cord to a lamp. If you wind the tape carelessly you can put a barrier between the wires you are trying to join. Your "bandage" sort of "wounds" the thing you are trying to heal.

Imagine a similar situation. (Of course, not all analogies will yield a solution. Some are better than others and you might have to run through a number of them to find the apt analogy.)

Find the unique feature of the analogue and apply this unique feature to help you solve your problem.

In the electrical cord, the essential activity is to close the circuit by twisting the wires back together and so reestablish the flow of electricity. Twisting wires together reestablishes the flow of electricity. The objective of a new bandage would be to reestablish the natural flow. How would you do this? The group

built a bandage that used magnesium, a non toxic conductor of electricity that allowed the flow of the body's own current to facilitate healing. Identifying and applying the unique feature of the analogy is skill set three.

Another example: Packing Potato Chips

State the paradox in the problem:

Though thin potato chips have little volume, they take up too much space in packing and shipping.

Find an analogy:

Analogy is leaves in the fall. They pack loosely in garbage bags.

Find unique feature and apply that feature to problem.

When leaves get wet they can be packed together tightly. The engineers figured out a way to pack potato chips wet and then dry them. The result. Pringles.

Preparation:

- Study explanation above.
- Prepare a three to five minute presentation that includes identifying a problem you foresee in applying Threeing to your situation, finding the paradox in the problem, finding a relevant analogy and an application of that analogy to the problem.

Objective:

- To use Threeing to solve problems

Materials:

- Writing materials for everyone.
- Talking sticks.
- Small tables four chairs each.

Procedures:

Recombine group into teams of four. Avoid putting people on the same teams who have identified the same problem. Avoid repeating teams.

5 minutes

Exercise for Problem Solving #1

Each person presents his assignment to the team. Red, Yellow and Blue feedback to support the problem solving effort of the presenter. Red respond to the statement of the problem, suggesting clarification of the problem and the paradox where appropriate.

Yellow responds to the analogy, suggesting other analogies if appropriate.

Blue responds to the application of the analogy to the problem. Suggests other ways if appropriate.

15 minutes

Rotate roles. Presenter becomes Yellow. Yellow becomes Red. Red becomes Blue. Blue becomes the Presenter. Repeat Exercise.

15 minutes

Rotate roles. Presenter becomes Yellow. Yellow becomes Red. Red becomes Blue. Blue becomes the Presenter. Repeat Exercise.

15 minutes

Rotate roles. Presenter becomes Yellow. Yellow becomes Red. Red becomes Blue. Blue becomes the Presenter. Repeat Exercise.

15 minutes

Teams report on their findings to the group at large for discussion.

25 minutes

End Of Lesson

Extras

Identify and resolve other problems using the same procedure.

Research Bill Gordon's work on problem solving.
Research other approaches to problem solving. Adapt them to the three person solution.