

Skill development:

1. Practice with a thinking skill that is needed throughout the problem solving process.
2. The *divergent* thinking skill, creativity, is explored in this unit. Analysis is a general *convergent* thinking skill employing judgement. This was considered in MPS 6 and identifying series and sequences, checking for consistency and reasoning (or critical thinking) are developed in later MPS units.
3. As children we were very good at fantasy , creativity and brainstorming. Research evidence has shown that as we mature we tend to *be serious*, to become more critical. Our imagination and creative skills tend to become stifled. We need to reawaken your potential, your skill and your confidence.
4. Brainstorming is often well-known to many; but as a 5 to 10 minute activity done in groups. However, our exposure has often been superficial. Here we want to give you detailed practice with the skill and a fundamental understanding of why and how it works. We want to improve both your skill and your attitude about brainstorming.
5. Most of our previous experience has been with group brainstorming. In practice, we also need to be skilled in brainstorming as an individual. Often we are alone and we need to gather novel ideas and options.
6. Skill in coping with silences and negative feelings (*This brainstorming is stupid! I can't think of anything else.*)
7. Often brainstorming sessions falter; we need skill in igniting them again by introducing **triggers**. Over a dozen trigger exist. Some will work for you; some will not. We want to give you a chance to experience the different ones and select the ones that will work for you.
8. Willing ness to risk; take a crazy idea and convert it into a technically feasible idea.
9. Skill in using crazy ideas as *stepping stones* to new ideas; instead of trying a fake the use of the crazy idea as a potential workable solution. Understand the fundamental basis for why and how the stepping stone works.
10. Skill in running brainstorming sessions and in training others.
11. Emphasis on being active and writing things down
12. Acquire skill at listening to other ideas and building on them
13. Acquire skill in self assessment and assessment of performance.
14. Acquire some skill in giving and receiving feedback
15. Through self awareness, begin to improve self confidence
16. Skill in communication and thinking on your feet as you lead a brainstorming session.
17. Begin to develop an environment of trust where risking is OK.

Applicability: independent of the discipline or age. However, it helps if participants have a content-rich, open ended problem they wish to solve. One way is to start the workshop by having each list a current challenging problem with which they are wrestling.

Time required: 2 to 6 hours

Brief description: The brainstorming atmosphere is introduced; the characteristics of Short Term Memory (STM) and Long Term Memory (LTM) from cognitive psychology are used to rationalize the events in the brainstorming session. The focus later shifts to the use of about a dozen triggers to get a faltering brainstorming session ignited. The effects of silences and negative feelings are addressed. The components that prevent creativity are identified and explored. Participants work in groups of six and get practice participating in , leading and evaluating brainstorming sessions. Pre and post tests can be used to help participants see progress.

Comments: This is a very positive and fun workshop.

Prerequisites: none

Experience with this workshop: given about 75 times to educators, industrialists, engineers, administrators, Grade 7 gifted students, and my own classes (25 to 80). Presented internationally in US, Japan, Sweden. The major constraint is to supply the electrical circuits to power an overhead projector for each group of six participants.

Additional work you have to do: none