

MPS7-1

MPS 7 Creativity Objectives © copyright, Donald R. Woods, 1998

Creativity is a divergent thinking skill in which we postpone judgement and try to see the situation from as many unique perspectives as possible. Our goal is 50 ideas in 5 min with ideas in at least 7 different categories and with several ideas being novel.

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.

Pretest:

Awareness: how aware are you of what you do when you use this ability? Rate with an “x”

0	1	2	3	4	5	6	7	8	9	10
Unaware				Aware of					Very aware	
I just				Some					I can describe	
do it									The details of	
									how I do it	

Skill: how skilled are you in doing this activity? Rate with an “x”

0	1	2	3	4	5	6	7	8	9	10
Poor		Fair		Good			Very good			Excellent

Comments:

Number of brainstorming sessions in which you have participated:

0 2 4 8 10 >10

Learning objectives

MPS 7 Creativity

1.1 given a term listed under "concepts introduced", you should be able to give a word definition, list pertinent characteristics and cite an example. You will be able to describe d-lines, the limitations of short term memory and rationalize the processes and procedures used in brainstorming.

2.1 given an object or a situation, as a group of about six you will be able to generate at least 50 uses, attributes, or ideas in 5 minutes.

2.2 given an object or situation, as an individual you will be able to generate at least 50 ideas in five minutes (or write out 50 ideas in ten minutes).

2.3 given an object or situation, as an individual you will be able to generate at least 50 ideas in five minutes (or write out 50 ideas in ten minutes) **and** the ideas will belong to at least 7 different categories **and** a group of three independent judges shall identify one idea that is "unique".

3.1 given a brainstorming session, you will be able to recognize silences and negative feelings and to cope positively with these such that the flow of ideas continues.

3.2 given a brainstorming session that is faltering, you will be able to use a trigger to get the flow of ideas going again.

3.3 as a leader/facilitator of a brainstorming session, you will be able to instruct the group, maintain the brainstorming atmosphere and the morale of the group and facilitate their producing 50 ideas in 5 min.

5.1 given a crazy idea, you will be able to describe your mental processes used to convert that idea into a technically feasible idea by using the triggered idea as a "stepping stone."

6.1 as a member of a brainstorming session, you will refrain from elaborating excessively, and criticizing. You will have few silent periods. Your assessment on these three items will be better than 8 on a 0 to 10 point scale.

6.2 you will be able to describe your preferred style of brainstorming and your preferred use of triggers.

Concepts introduced

Brainstorming, triggers, silences, names of a dozen triggers, characteristics of memory, d-lines, STM., deferring judgement, building on ideas, stepping stone.

MPS 7: Creativity: Example assessment tasks:

Time 1. Creativity, Classification and Awareness
40

min For the trouble shooting problem given in Figure 1:

[10] (a) brainstorm 50 possible causes and write these down in 10 min.

[13] (b) analyze your list, note the basis of classification, and divide your ideas at least seven different categories.

[2] (c) select four technically feasible ideas.

- [15] (d) select the "craziest" idea, and write out the your thought processes as you use this idea as a trigger or stepping stone to obtain a "new" technically feasible idea.

***** end of question 1 *****

Time 2. Assessment, Objectives, Criteria and Creativity

- 30 min For the subgoal "in the context of creativity, to show that I can achieve objectives more complex than those expected in class and as outlined in the objectives for MPS Unit 7".
- (a) If pertinent, break this into further subgoals.
 - (b) Rewrite the subgoal in "observable terms".
 - (c) Create at least one measurable criterion that you be used to measure success in achieving the subgoal.
 - (d) Write out one type of evidence you would collect to show progress toward your subgoal.

***** end of question 2 *****