A structured, focused idea generation method. More than sitting in a group discussing ideas. Easy. Powerful…..if rules are followed.

Classic brainstorming was invented by Alex Osborn in 1938. It is a group idea generation method which works best for groups of three to nine members. You get better with practice. Requires structure, including a facilitator, problem definition, techniques for participation by all, methods for moving when group gets stuck and process for idea recording. Although structured, brainstorming sessions should be fun.

**Rules**

1. Generate many solutions.
2. Wild ideas encouraged.
3. Defer ALL judgment until later.

**More on the rules:**

1. Go for quantity. The more ideas the better. No long explanations, just throw your idea out. Can be fleshed out later. Idea need not be original. OK to “hitchhike” on other people's ideas. Be willing to share. All ideas are owned by the group versus individuals within the group. Get used to the concept of someone else “stealing” your idea and adding to create a modified idea.

2. With crazy ideas, the better the chance of coming up with something truly innovative. Crazy ideas will be tamed (later) during concept evaluation. Crazy ideas may have a germ of sanity in them, may lead to new idea categories, or may trigger new ideas by someone else in the group. Many in the group will feel uncomfortable sharing wild ideas, particularly if the group has engineers who have had years of training to stay realistic and practical. It takes practice and willingness to suspend inhibitions to throw out a wild idea. But, try it, it’s fun.

3. No evaluation allowed. There are no “right” or “wrong” ideas in brainstorming, just ideas. You MUST resist the urge to say what you think about an idea. The minute you say, “Oh that won’t work”, or “I tried that before”, or “That’s too crazy”, you have killed the session. Even worse are comments which put down the idea originator: “How could you be so dumb?”, “I can’t believe you said that”, “Don’t you know that won’t work?”. Favorable comments, laughter are OK. Session facilitator must be vigilant and immediately quash all attempts at judgment.

**Procedure in Brief**

1. Formulate the problem definition
2. Chose time and place
3. Brief the team on problem definition and brainstorming process
4. Warm-up
5. Brainstorm
6. Wrap-up
**Procedure**

This assumes you have been appointed the facilitator and are charged with organizing and running the brainstorming session. A specific procedure will be described here, although many variants are described in the references.

**Problem Definition:** First, define the problem for which solutions are to be generated. It should neither be too broad, nor too specific. Complex problems are best split into functional sub-problems, each of which are addressed in their own brainstorming session. Keep the problem statement simple (one sentence), and write down in advance. A paragraph or two which provides background and puts the problem statement in context is helpful.

**Organizing:** Find three to nine people for the session. Often, brainstorming works well when participants are creative people not familiar with the problem. Find a place. Rooms with a round conference table work best. Next best is a place where participants can sit in a circle. Worst is a classroom where participants sit in a row facing the front. Reserve one hour for the session. Distribute the problem statement to participants in advance. If there are to be food or snacks, hold off until the session ends. Bring a very large stack of 3x5 inch white index cards and some fine point, felt-tip markers (such as Flairs).

**Brief the team:** Spend the first few minutes socializing until everyone arrives. Then introduce the problem and problem statement. Answer any questions. Explain what will happen in the session. Explain the three rules of brainstorming. Emphasize that judgment MUST be deferred and that you as facilitator will be forceful about this.

**Warm-up:** Often, a five-minute warm-up activity helps to loosen the group and get creative juices flowing. Ideas for warm-up are described below.

**Brainstorming:** Restate the problem definition and start brainstorming. Set a 20-30 minute limit. Go round-robin fashion around the table. Have a My Turn object (a card or an old tennis ball, or a sock) which gets passed around. The person with the My Turn is the one who throws out an idea. If that person does not have an idea, she or he passes the My Turn on the next. Ideas must be expressed in a few (10 or less) key words. The session must proceed rapidly, especially at the start. The My Turn should be moving from person to person at around 10 second intervals. If someone has a hitchhiking idea which builds off an idea which has just been presented, that person raises their hand and gets priority. All ideas are recorded on the unruled side of index cards, one idea per card. Ideas are recorded with a quick (10-30 second) sketch or a few (1-5) key words. Recording must be quick because the session cannot wait while ideas are recorded. There are three ways to handle idea recording: (1) a separate Scribe does all the recording (rarely does a team have this luxury), (2) the facilitator does all the recording, (3) each participant records their own ideas. The last is preferred because then participants can be recording their ideas as they occur. Spread the idea cards out on the table as you go along. Remember, do NOT judge the ideas! If the ideas start to peter out, try one of the paradigm shifting techniques described in the following section. When you approach the time limit, give a two minute warning, because that often will lead to a final burst of ideas. The session should have a time limit rather than ending when ideas run out. Yes it’s hard, but stick to this rule.

**Wrap-up**

Close the session by thanking the participants and describing what will happen to the ideas. Reflect on the session. Were participants satisfied? What went right, what was not right? How could the next session be improved. Collect all the cards and store in a safe place; they represent valuable intellectual property. Dismiss participants.
**Paradigm Shifting Techniques**

Try one or more of these methods to get things going if the brainstorming session is starting to slow down.

**Constraint Relaxation:** Relax one of the constraints. What if there were no cost limit? What if it could be as heavy as you wanted? What if you could use a material which doesn’t exist yet. What if gravity didn’t exist? What if you could travel faster than light?

**Scale:** Think of the same problem on a different scale. What if instead of lifting a boat you were lifting an ant... or vice-versa. What if the product had to be 10 times smaller... or 100 times bigger. What if it had to cost 25 cents rather than $100.

**Opposites:** Brainstorm on an opposite problem. Turn the problem inside out or upside down or change the order. What if you were trying to drop rather than lift? What if you were trying to set a fire rather than put it out? What if customers served food to waiters in restaurants? What if you drove before you started your car?

**Provocation and Movement:** Throw out a completely absurd “provocation” related to the problem (e.g. “Cars have square wheels”, or “Every house has 100 phones”). Brainstorm and try to extract principles or focus on the differences to help you move towards useful ideas. This is a very powerful method and every facilitator should read [3] to learn how to apply it.

**What to do with the cards**

First, go through the cards and eliminate duplicates. Then, spread the cards out on a large table and start grouping in any fashion which makes sense. Rather than defining categories in advance, simply place similar cards next to each other. Groupings will gradually become apparent. This Affinity Mapping method works well if two or more people are participating. Their should be no talking and each person moves cards to where they think is best, even it means moving a card that another person has just moved. If this process triggers additional ideas, record them on new cards.

Next comes the process of judging and selecting ideas. This process will not be explained in detail here, except to say that one should not be thinking of narrowing down to one idea right away, that all selection must be done on the basis of a stated set of criteria rather than by intuition or gut feel, and that one should always be open to more ideas being generated.

**Brainstorming Variations**

Each participant comes to the session with 5-10 ideas recorded on index cards, their entry ticket. No ticket, no entry. This variation forces participants to think up ideas independently before entering the group session. It also gives participants more time to record their ideas using quick sketches.

**Warmup Exercises**

(Numbers indicate references where ideas came from.)

Force-fit: How could you use the idea of caged white rats to improve the food and atmosphere in a school cafeteria? [1]

Force-fit: How could you use things you have in your garage to improve metro area traffic congestion?
Force-fit: How could you use things you might find at a stationery store to help with after dinner cleanup?

Think of all the ways you could use a 12 by 12 inch square of aluminum foil. [1]

Think of all the ways you could use a set of 12 paperclips.

Free association: Facilitator draws a symbol on a card. Participants free associate and come up with new symbols. [1]

What if restaurants had no food. [3]

What if there were only one dial button on a telephone. [3]

What if police had six eyes. [3]

What if pens wrote by themselves. [3]

References

