**BRAINSTORMING**

Brainstorming is a group creativity technique by which effort are being made to find conclusion for a specific problem by gathering lists of ideas. It is mostly use in the ideation phase. The concept of brainstorming includes defining a simple or complex problem for which solutions are generated that are later accepted or rejected. Brainstorming provides a relaxed, informal approach to problem solving with lateral thinking which help in stimulation of human mind towards creative problem-solving. People are being encourage to come out with their thoughts and new ideas, that can at first, seem a bit crazy.

For instance, it can be said here with the problems associated with the use of an electric iron. The principle of an electric iron is that, when a current passe through the coil, the coil gets red hot and transfers the heat to the base plate of the iron through conduction. Thus, when there is a power outbreak, one cannot continue with what he was doing.

The major solution to this problem through brainstorming is the use of a capacitor. This instrument stores electrical energy in the form of charges to discharge later when there is electrical breakdown. As such the use of capacitors in the electrical system of an electrical iron would supplement and control the problem of electrical outbreak.

**HISTORY: ALEX OSBORN GAVE BIRTH TO BRAINSTORMING**

In the 1940s, an advertising executive by the name Alex Osborn came up with the technique of brainstorming following his frustration at the inability of employees to come up with innovative ideas for advertising campaigns. The technique was the result of his attempts to fix rules that would provide people with the freedom of action and mind to trigger and reveal fresh ideas. The original name he gave to this idealization process he invented was “think up” before it later came to be called brainstorming. According to Osborn, brainstorming is a conference technique through the practice of which a group endeavors to come up with a solution for a particular problem by collecting all the ideas spontaneously contributed by the participating members. Osborn’s argument was those two principles:

1) defer judgment

2) reach for quantity helped in achieving ideate efficacy.

These principles were followed by Osborn’s four rules of brainstorming which may be outlined as follows:

• Put the emphasis on quantity of ideas (as the maxim goes, “quantity breeds quality”);

• Hold back criticism or judgment;

• Be open to bizarre/strange ideas;

• Blend ideas to enhance them

These rules were established with the objective of lessening social inhibitions if any among the group members, boosting overall group creativity and of course, fueling idea generation. Osborn was of the opinion that brainstorming should only address one specific question because he believed that sessions that tried to tackle many questions were unproductive.

**Group Brainstorming**

Here, you can take advantage of the full experience and creativity of all team members. When one member gets stuck with an idea, another member's creativity and experience can take the idea to the next stage. You can develop ideas in greater depth with group brainstorming than you can with individual brainstorming. Another advantage of group brainstorming is that it helps everyone feel that they've contributed to the solution, and it reminds people that others have creative ideas to offer. It's also fun, so it can be great for team building! Group brainstorming can be risky for individuals. Unusual suggestions may appear to lack value at first sight – this is where you need to chair sessions tightly, so that the group doesn't crush these ideas and stifle creativity. Where possible, participants should come from a wide range of disciplines. This cross-section of experience can make the session more creative. However, don't make the group too big: as with other types of teamwork, groups of five to seven people are usually most effective.

**Individual Brainstorming**

While group brainstorming is often more effective at generating ideas than normal group problem solving, several studies have shown that individual brainstorming produces more – and often better – ideas than group brainstorming. This can occur because groups aren't always strict in following the rules of brainstorming, and bad behaviors creep in. Mostly, though, this happens because people pay so much attention to other people that they don't generate ideas of their own – or they forget these ideas while they wait for their turn to speak. This is called "blocking." When you brainstorm on your own, you don't have to worry about other people's egos or opinions, and you can be freer and more creative. For example, you might find that an idea you'd hesitate to bring up in a group develops into something special when you explore it on your own. However, you may not develop ideas as fully when you're on your own, because you don't have the Individual brainstorming is most effective when you need to solve a simple problem, generate a list of ideas, or focus on a broad issue. Group brainstorming is often more effective for solving complex problems. Wider experience of other group members Individual brainstorming is most effective when you need to solve a simple problem, generate a list of ideas, or focus on a broad issue. Group brainstorming is often more effective for solving

**BRAINSTORMING TECHNIQUES**

Ideas are not mechanically manufactured but rather they are emotionally inspired. The foremost criterion of brainstorming is extracting both the idea and the thought processes to manifest a complete course of action. Let take a cue of the various brainstorming examples to nudge our ideas.

• Brain writing

• Rapid idealization

• Figure storming

• Eidetic image method

• Online brainstorming, aka brain netting

• Step-ladder technique

• Mind mapping

**Mind mapping**

Mind mapping is a visual tool for enhancing the brainstorming process. In essence, you are drawing a picture of the relationships among and between ideas. It may include to do lists, thought clouds, doodles, notes, key points, information and any other thing else that help bring to objectives.

**ROLE STORMING**

This is a practical approach to considering what someone else might do in a similar situation. It is recommended that you engage role storming with someone you trust, with a bit of favorable judgement.

**DESIGN CHARRETTE**

Charrette is a brainstorming technique that is much similar to workshops. It typically involves dedicated collaboration by a group working collectively towards a project or a study of program. Charrette follows a target-oriented course, that has to be accomplished within the allotted time.

**SWOT ANALYSIS**

This is more an objective than a method. It works with the categorical analysis of the four pillars of success:

1. Strength
2. Weakness
3. Opportunity
4. Threat

**ADVANTAGES OF BRAINSTORMING**

1. Brainstorming allows people to think more freely; without fear of judgement.
2. Brainstorming encourages open and ongoing collaboration to solve problems and generate innovative ideas.
3. Brainstorming helps in the generation of new hood of ideas quickly, which can be refined and merged to create the ideal solution.
4. Brainstorming introduces different perspectives, and opens the door to out-of-the-box

**DISDVANTAGE OF BRAINSTORMING**

A major disadvantage of brainstorming technique is that it produces an idea without screening them. Although it produces a wide variety of ideas, many of them may not be qualified ideas.