Improving idea generation

Why you should re-think how you brainstorm

When a creative solution is called for, people convene in meeting rooms for a time-honored tradition: "the brainstorm." Ideas are tossed out freely. No idea is too silly to propose, and even if it is, this is no time for opinions. Free association, free of judgment, is the key to producing the most creative ideas … or so we've been told. Although widely used, is there empirical evidence that brainstorms actually work? Decades of research into idea generation reach a surprising conclusion: The traditional brainstorm isn't the best technique for developing ideas.

What the studies say

Brainstorming was popularized in the 1940s when Alex Osborn, a partner at the advertising agency BBDO, described the technique in his book, *Your Creative Power*. Numerous studies over the decades have cast doubt on the effectiveness of Osborn's technique. Here's what two notable studies found:

Individual thinking produces more solutions

Yale University, 1958[1]

- Groups of students and individuals were given puzzles to solve using Osborn's brainstorm technique.
- Individuals working alone came up with about twice as many solutions as the brainstorm groups.
- Researchers also rated those individual solutions more "feasible" and "effective" than those devised by the brainstorm groups.

Criticism makes a difference

University of California at Berkeley, 2004[2]

- Teams of undergraduates were charged with solving the same problem under different conditions:
  - Use standard brainstorming techniques—freely propose ideas, without judgment
  - Freely propose ideas, but debate and criticize them
  - Collaborate as you wish (control group)
- Groups told to debate ideas came up with an average of 20% more ideas than the brainstorm groups.
- Researchers conjectured that the criticism condition generates more ideas for two reasons:
  1. Expression of competing viewpoints stimulates additional thoughts.
  2. Criticism is normally discouraged, so breaking this "rule" may be liberating and stimulating.

Changing the rules

These studies don't necessarily negate the effectiveness of working in groups to come up with ideas, but rather point to more effective ways to collaborate than the traditional brainstorm. Indeed, team problem-solving is often necessary. For example, an analysis of scientific papers and patents reveals that this work, once dominated by solo authors, is now ruled by teams.[3] The trick is to make such collaborations as effective as possible. One way to do so is to re-think the rules of the brainstorm.

Executive Summary

- Studies indicate traditional brainstorming (group idea generation free of judgment) is not the most effective way to come up with ideas.
- Starting the ideation process alone can generate better ideas.
- The traditional brainstorming bias against criticizing ideas can be counter-productive.
- Group collaborations can be productive and creative with some re-tooling of traditional brainstorming.

4 ways to generate ideas

The traditional brainstorm did get one thing right: There is creative power in teams.
Use these research-supported methods to make your next creative collaboration more productive.

Start solo 1

2 **Embrace debate**

Mix it up 3

4 **Talk in the halls**
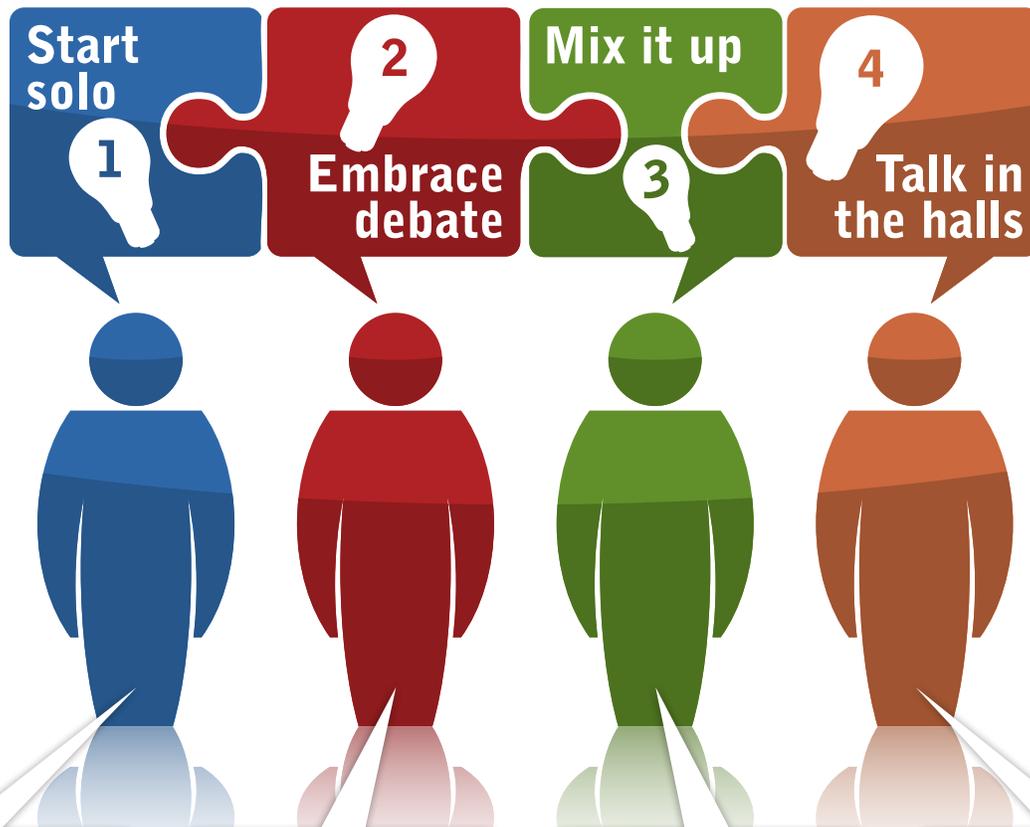
1. Start solo

- Have individuals develop creative ideas separately before sharing in a group.
- Working alone first allows for more focused thinking.
- Evidence shows people can come up with more ideas working alone.[1]

2. Embrace debate

- When sharing ideas, encourage the team to challenge one another.
- Freedom to disagree can open up new ideas and perspectives.
- Research shows creativity can thrive on conflict, because group members feel less pressure to conform.[4]

3. Mix it up

- Research shows that a mix of participants helps make the creative process more productive.[5]
- Mix team members who have successfully collaborated before. Add a few new people for fresh ideas that keep the team from going with the status quo.[5]
- Form interdisciplinary teams for multiple perspectives.

4. Talk in the halls

- A brief conversation with a colleague may be all it takes to spur a new idea.
- This is a kind of "knowledge spillover," which is an exchange of ideas and information often facilitated by proximity.
- The headquarters of Pixar were designed by Steve Jobs to facilitate this kind of unplanned collaboration.[6]

These evidence-based techniques can make idea sessions more effective and productive, helping organizations have more "a-ha" moments.

[1] Taylor, D., Berry, P., Block, C. Does Group Participation When Using Brainstorming Facilitate or Inhibit Creative Thinking? *Administrative Science Quarterly*. 1958;3(1):23-47.

[2] Nemeth, C., Personnaz, B., Personnaz M., Goncalo J. The liberating role of conflict in group creativity: A study in two countries. *European Journal of Social Psychology*. 2004;34:365-374.

[3] Wuchty, S., Jones, B., Uzzi, B. The Increasing Dominance of Teams in Production of Knowledge. *Science*. 2007;316(5827):1036-1039.

[4] Nemeth, C. and Nemeth-Brown, B. Better than Individuals? The potential benefits of dissent and diversity for group creativity. *Group Creativity: Innovation through Collaboration*. Oxford University Press; 2003:63-84.

[5] Uzzi, B. and Spiro, J. Collaboration and Creativity: The Small World Problem. *American Journal of Sociology*. 2005;111(2):447-504.

[6] Searer, S. (2012/07/16). Pixar Headquarters and the Legacy of Steve Jobs. Accessed from http://officesnapshots.com/2012/07/16/pixar-headquarters-and-the-legacy-of-steve-jobs/

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