

By Robert Sutton

## **Eight Tips for Better Brainstorming**

Should your team brainstorm as a group or as individuals? At creative companies, switching between the two modes can be seamless—and highly productive

A recent *Wall Street Journal* story took on the hot topic of brainstorming. Titled "Brainstorming Works Best if People Scramble For Ideas on Their Own," the piece quoted research showing that people are "more creative" when they "brainstorm" alone rather than in meetings and offered supporting testimonials from managers.

This is a subject I am quite familiar with. Along with Andy Hargadon, I completed an 18-month ethnography in the 1990s on how the innovation consultants at IDEO do creative work, and we've both spent much of the past decade studying other innovative organizations. At the time, Andy was my PhD student, and now he is an associate professor at the University of California at Davis.

We agree that badly managed face-to-face brainstorms do stifle creativity and we agree that, even when brainstorming is done right, people probably can still generate ideas faster when they work alone. But it is total nonsense to conclude that if you want creativity, you ought to keep your people in solitary confinement where they can't "waste time" listening to and building on the ideas of others.

Here's the problem: Most studies of brainstorming are rigorous but irrelevant to the challenge of managing creative work. For starters, comparing whether creativity happens best in groups or alone is pretty silly when you look at how creative work is actually done. At creative companies, people switch between both modes so seamlessly that it is hard to notice where individual work ends and group work starts.

**THEORY VS. PRACTICE.** At group brainstorms, individuals often "tune out" for 5 or 10 minutes to sketch a product or organizational structure inspired by the conversation, and then jump back into the conversation to show the others their idea. In another typical scenario, I recall an IDEO brainstorm about a cool haircutting device, after which one participant, engineer Roby Stancel, ran off to build it. Drawing a hard line between "individual" and "group" creativity in these and dozens of other examples is pointless. What really matters is that the two modes mingle as the creative process unfolds.

This artificial group vs. individual structure isn't the only problem with brainstorming experiments. These experiments are fake in that nearly all involve people who have no prior experience or training in group brainstorming. These brainstorming virgins (usually undergraduates in psychology classes) are briefly presented a list of rules and are then instructed to spend 10 or 15 minutes generating novel ideas about topics that they know and most likely care nothing about.

A common topic in these experiments is "What would happen if everyone had an extra thumb?" That might be fun to think about, but it isn't a problem they will ever actually face.

In contrast, consider real brainstorms led by SAP's Design Services Team in which participants care very much about, say, user-friendly software and will use any good ideas generated on the subject. These brainstorms have already led SAP to develop many clever prototypes and are starting to change the software that the company ships.

**INNOVATION ENGINE.** These experimental studies also fail to mirror authentic brainstorms because the standard and essential rule "Build on and extend others' ideas" isn't applied. To allow cleaner comparisons between group and individual brainstorming "performance,"

individuals aren't asked to consider the ideas of others. In any event, it is impossible to build on the thinking of fellow brainstormers when you work alone.

The main finding from these studies is that people "brainstorming" alone speak more ideas (per person) into a microphone during the 10- or 15-minute period than those in a group brainstorm. Researchers conclude that the "productivity loss" of group brainstorming happens mainly because people take turns talking and therefore can't spew out ideas as fast. It's also worth noting that these studies don't count listening to other people's ideas as a productive behavior.

I am not joking; most of this research is that trivial.

Group brainstorming isn't a panacea even when it is done right, and is a waste of time—or worse—when done wrong. But a broad body of peer-reviewed research on teams and organizations, as well as my own observations, suggests that, when brainstorming sessions are managed right and skillfully linked to other work practices, such gatherings can promote innovation. Eight guidelines are especially important for running effective face-to-face brainstorms:

1. Use brainstorming to combine and extend ideas, not just to harvest ideas.

Andrew Hargadon's *How Breakthroughs Happen* shows that creativity occurs when people find ways to build on existing ideas. The power of group brainstorming comes from creating a safe place where people with different ideas can share, blend, and extend their diverse knowledge. If your goal is to just "collect the creative ideas that are out there," group brainstorms are a waste of time. A Web-based system for collecting ideas or an old-fashioned employee suggestion box is good enough.

2. Don't bother if people live in fear.

As Sigmund Freud observed, groups bring out the best and the worst in people. If people believe they will be teased, paid less, demoted, fired, or otherwise humiliated, group brainstorming is a bad idea. If your company fires 10% of its employees every year, for instance, people might be too afraid of saying something "dumb" to brainstorm effectively. It is better to have them just work alone.

3. Do individual brainstorming before and after group sessions.

Alex Osborn's 1950s classic *Applied Imagination*, which popularized brainstorming, gave advice that is still sound: Creativity comes from a blend of individual and collective "ideation." Skilled organizers tell participants what the topic will be before a brainstorm. I once went to a session on how to give an "itch-less haircut," and, at the suggestion of the organizer, took a preliminary trip to a salon where I asked the stylist for a cut as "itch-free as possible" to jumpstart my thinking. At the brainstorm, I reported how tightly the stylist wrapped the cape around my neck and how she put talcum powder all over me—effective, if uncomfortable and messy measures.

4. Brainstorming sessions are worthless unless they are woven with other work practices.

Brainstorming is just one of many practices that make a company creative, and it is of little value if it's not combined with other practices—such as observing users, talking to experts, or building prototype products or experiences—that provide an outlet for the ideas generated. Some of the worst "creative" companies that I've worked with are great at coming up with new ideas, but never actually get around to implementing them. A student and I once studied a team that spent a year brainstorming and arguing about a simple product without producing even a single prototype, even though a good engineer could have built one in an hour or two. The project was finally killed when a competitor came out with the product.

5. Brainstorming requires skill and experience both to do and, especially, to facilitate.

In all of the places that I've seen brainstorming used effectively—Hewlett-Packard, SAP's Design Services Team, the Hasso Plattner Institute of Design at Stanford (or "The d.school"), the Institute for the Future, Frog Design, and IDEO—brainstorming is treated as a skill that takes months or

years to master. Facilitating a session is a skill that takes even longer to develop. If you hold brainstorms every now and then, and they are led by people without skill and experience, don't be surprised if participants "sit there looking embarrassed, like we're all new to a nudist colony," as one manager told *The Wall Street Journal*. That is how humans act when they do something new and have poor teachers.

6. A good brainstorming session is competitive—in the right way.

In the best brainstorms, people feel pressure to show off what they know and how skilled they are at building on others' ideas. But people are also competitive in a paradoxical way. They "compete" to get everyone else to contribute, to make everyone feel like part of the group, and to treat everyone as collaborators toward a common goal. The worst thing a manager can do is set up the session as an "I win, you lose" game, in which ideas are explicitly rated, ranked, and rewarded.

A Stanford graduate student once told me about a team leader at his former company who started giving bonuses to people who generated "the best" ideas in brainstorms. The resulting fear and dysfunctional competition drastically reduced the number of ideas generated by what had been a creative and cooperative group just weeks earlier.

7. Use brainstorming sessions for more than just generating good ideas.

Brainstorms aren't just a place to generate good ideas. At IDEO, these gatherings support the company's culture and work practices in a host of other ways. Project teams use brainstorms to get inputs from people with diverse skills throughout the company. In the process, a lot of other good things happen. Knowledge is spread about new industries and technologies, newcomers and veterans learn—or are reminded—about who knows what, and jumping into a brainstorm for an hour or so to think about someone else's problem provides a welcome respite from each designer's own projects. The explicit goal of a group brainstorm is to generate ideas. But the other benefits of routinely gathering rotating groups of people from around a company to talk about new and old ideas might ultimately be more important for supporting creative work.

8. Follow the rules, or don't call it a brainstorm.

This is true even if you only hold occasional brainstorms and even if your work doesn't require constant creativity. The worst "brainstorms" happen when the term is used loosely, and the rules aren't followed—or known—at all. Perhaps the biggest mistake that leaders make is failing to keep their mouths shut. I once went to a meeting that started with the boss saying, "Let's brainstorm." He followed this pronouncement with 30 minutes of his own rambling thoughts, without a single idea coming from the others in the room. Now that's productivity loss!

The rules vary from place to place. But Alex Osborn's original four still work: 1) Don't allow criticism; 2) Encourage wild ideas; 3) Go for quantity; 4) Combine and/or improve on others' ideas. To steal from IDEO, I'd add "One conversation at a time" and "Stay focused on the topic," as both help save groups from dissolving into disorder.

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