Brainstorming: Some Myths and Realities

Donald J. Treffinger and Grover C. Young
Center for Creative Learning
and
Scott G. Isaksen
Creative Problem Solving Group–Buffalo

Brainstorming is one of the most well-known of all the creative problem solving tools. Its popularity stems from its inventor’s (Alex F. Osborn) work as an advertising professional and his recognition of a real need for increasing group productivity. However, during the course of 50 or more years that brainstorming has been widely discussed and applied, a number of myths have crept into view. The purposes of this article are to review six of the most common myths and misunderstandings, and to discuss several corresponding realities that will help you to be more productive and effective in applying this useful and powerful tool. For readers interested in a more detailed, technical review of research, Isaksen (1998) provided a very extensive critical review and analysis of published studies of brainstorming.

Myth #1: “Let’s solve this problem by brainstorming.”

The popular notion that you solve a problem or create an invention by brainstorming is a misunderstanding. Brainstorming is just one of many tools for generating options, whereas problem solving and invention draw on a number of tools, including some for generating options, and others for focusing your thinking (Isaksen, Dorval, & Treffinger, 1998; Think Magazine, 1996; Treffinger & Nassab, 1997, 1998). Young (1997a,b,c,d) illustrated practical applications of other thinking tools for inventing. Indeed, the brainstorming tool can be very useful for an open-ended search, in which you are attempting to generate many, varied, or unusual possibilities. However, as in dealing with any complex task, one tool just does not do the whole job. What would happen, for example, if you tried to build an entire house using only a screwdriver? To do the job right requires a number of tools, not just one, as well careful thinking and planning about what tools to use at any time and how to select and apply them.

Myth #2: Brainstorming is really just another name for discussion.

Too often people misuse the term brainstorm by using it to describe any informal conversation or discussion about a question, problem, issue, or challenge that needs some creative thinking. Some people also use the brainstorming tool improperly. Using a tool improperly can result in damage to the tool as well as to the object to which the tool is being applied. The common misuses of brainstorming have led some people to refer to it
as “the pooling of ignorance,” “cerebral popcorn,” or “blamestorming.” Misuses of the tool can be avoided by remembering that brainstorming is really a very specific tool that is best used under very specific conditions and following well-defined guidelines.

To use the brainstorming tool (or any other tool for generating options) appropriately, review and observe four basic guidelines: suspend judgment; strive for quantity; accept all ideas; and seek combinations (Osborn, 1953; Treffinger, Isaksen, & Dorval, 1994). Begin with a **concisely-stated task or problem statement** that is open-ended, free of limiting criteria, and invites many possibilities. Effective brainstorming also involves capturing all the possibilities that are stated, expressing options briefly (“in headline form”), and extended effort, or stretching your thinking beyond the initial familiar or common possibilities. Remember that group brainstorming should be supplemented by individual ideation whenever possible. It is just as important and helpful to know and apply the basic guidelines and procedures for using brainstorming effectively and appropriately during the inventing process as it is for any other creative task or challenge. Inventors can use brainstorming to generate a number of possibilities for inventions and to explore a broader variety of options or viewpoints. They can also use this tool to stimulate their thinking as they search for original or unusual possibilities or to elaborate and refine their initial thoughts.

**Myth #3: In brainstorming, you can praise some ideas, but you should never criticize any of them.**

The principle of deferred judgment implies refraining from praise as well as criticism, since praise can often be just as judgmental as criticism. If you respond to one option by saying, “Good!,” or “Wow! That’s great!” you may have the effect of inhibiting ideation, rather than encouraging it. Some people might think, “Oh, we’re finished; that must be the correct response.” Others may conclude that they will be unable to come up with any possibilities that will be equally praise-worthy, and so stop thinking. Yet others may simply rely on responses that imitate the one that was praised.

The task of separating generating from judging applies, then, to both praise and criticism. The climate surrounding and supporting inventive thinking is one of the primary concerns relating to this myth; in fact, how you manage evaluation is the key consideration. Inventors need to feel free to search for and generate many, varied and unusual options. They must conduct their search without being limited initially by concerns about how (or whether) any of the possibilities might be accepted or judged. Refining, strengthening, developing, or choosing among options will occur later and separately within the inventing process.

**Myth #4: When brainstorming, you really haven’t done a good job unless you’ve created pages and pages full of options.**

The image that some people hold of a “brainstorming session” is that it involves hundreds of possibilities, filling several walls of the room with flip chart sheets—overflowing
with possibilities. There might be times when that kind of quantity would be important, necessary, and helpful. In practice, however, it can be equally effective and powerful to produce a much more modest “pool of possibilities.” We have found that, in a brief idea-generating session, a reasonable target is to search for 30-50 possibilities. That provides ample breadth to ensure that you have “stretched and pushed” beyond the most common or familiar options, and invested sufficient mental effort and energy to produce some variety and originality. The search for options will also be influenced by the nature of the task, and by the style of the person or group who has ownership for the task. Some people prefer to work with fewer options, and to keep their search directed towards options they will feel comfortable in knowing how to apply or carry out; others prefer many more possibilities, including a number that are very highly original or unusual.

One of the main issues involves determining when to stop generating more possibilities. In working with problem solving groups, we answer this question by checking back with the client (the person who owns the results of the session) to see how we’re doing. However, we will usually encourage participants to make an extended effort, to strive deliberately to stretch beyond the obvious possibilities or the familiar options that come most easily to mind. Success is less a matter of number of options, and more a matter of producing a sufficient set of novel, useful, and promising options to pursue further. When working alone or with a group, inventors must also monitor the flow of ideas or options, searching broadly, but also considering their progress and the directions their thinking is taking, in order to use their time and energy wisely.

**Myth #5:** Brainstorming is only used to think of possible solutions for a problem.

Brainstorming isn’t simply used to find solutions for a problem; at various stages of effective problem solving or inventing, brainstorming (and other tools for generating options) can be used in a variety of ways to help generate many options for different purposes. For example, sometimes the problem solving effort begins by focusing on a very “messy,” ill-structured, or ambiguous task, in which your goal is primarily to find out what problem really needs to be solved. In this setting, you might use the brainstorming tool to search for possible ways to express or “frame” the opportunities or challenges on which to work. You might also use brainstorming to generate data that will help you clarify the task and identify the key elements of the task or challenge. You might also use brainstorming to construct many possible specific problem statements. In inventing, the tool might be used to identify opportunities or needs for inventing. When your task involves generating ideas for a well-defined, carefully-stated challenge or problem, your brainstorming might involve searching for new and potentially useful ideas that might become possible solutions. The inventor might use brainstorming to explore ways for an existing product to be improved, extended, or enhanced. There may also be other situations, in which your task might be to prepare for action, or for the implementation of promising ideas. Then, you might brainstorm for possible criteria to use in refining, developing, analyzing, or choosing promising solutions or you might need to brainstorm to identify possible sources of
assistance or resistance and specific actions to carry out solutions successfully (Treffinger, Isaksen & Dorval, 1994).

**Myth #6: Brainstorming is another word for inventive thinking.**

Inventive thinking focuses on the creation of something new (i.e., that did not exist before) and useful (i.e., that has a purpose and value). Brainstorming is a tool that can contribute to inventive thinking, but it would be misleading for the terms to be used as if they were synonymous or interchangeable. Many popular terms are widely-used without a great deal of careful definition or distinction, and this often leads to confusion and difficulty for theory, research, or practice (Treffinger, 1996). We urge everyone who is involved in work on creativity and inventing to make new efforts towards language that is precise, concise, and consistent.

**Summary**

The four basic, historically familiar guidelines for brainstorming are the key rules to follow whenever you need to generate alternatives. The same guidelines apply to any generating tools and they are equally important to help inventors explore or produce creative and useful options. Brainstorming is one tool for ideation, but it is only one; many other tools are also readily available to help you extend you ideation into new and promising areas. Tools can be selected and used in different ways, at different times, or for varying purposes. Some of the tools help enlist the involvement of participants who may not be participating, for example, while others will help provide renewed energy for a tired group, and still others will help to open the door for new and different directions in the search for options. We hope that sharing these myths will help you to be successful in your own generating efforts, and to enjoy the excitement and stimulation of creative thinking in action. We also hope that you will make deliberate efforts to overcome these myths, in your own personal inventing and in helping students become successful creative thinkers, problem solvers, and inventors.

**References**


