

## **Pedagogical Practices—Brainstorming**

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Brainstorming is a pedagogical approach used to increase creative productivity, often in an effort to come up with potential solutions to a problem. The idea is that working in a group, students come up with the most outlandish ideas possible that could be considered as a solution to the given problem.

As the brainstorming discussion continues, students are encouraged to modify and improve on each other's ideas, moving from the seemingly crazy to actually possible solutions. Brainstorming can also be used as an independent learning activity, which has been shown to generate even more innovative ideas than brainstorming in a group.

### **Use of Brainstorming**

The following are some of the ways this teaching approach is used to engage students:

- Helping to define an issue
- Diagnosing a problem
- Generating possible solutions
- Coming up with a storyline
- Creating contingency plans for processes that might need alternate routes
- Determining potential flaws in a design or process
- Planning a presentation
- Creating a final project

### **Other Technology Use**

The following are a few of the free technologies that can be used for online brainstorming:

[bubbl.us](http://bubbl.us): A popular site for easily being able to create brainstorming or mind maps.

[iBrainstorm](#): A free brainstorming application for the iPad and the iPhone.

For a more comprehensive list, see David Kaupuler's "20 Tools for Brainstorming/Mind Mapping" published by Tech & Learning available online at

<http://www.techlearning.com/default.aspx?tabid=100&entryid=8315>

## Assessment

One recommended method for assessing how well students participated in a brainstorming activity is to use the following rating scale published at <http://www.literacynet.org/icans/chapter04/brainstorming3.html>.

Indicate how well the class did while brainstorming.

Use a (+) if students really worked at it.

Use a (=) if you felt students were so-so about it.

Use a (-) if students didn't really try at all.

- \_\_\_\_\_ Did not judge
- \_\_\_\_\_ Welcomed all ideas
- \_\_\_\_\_ Did not interrupt
- \_\_\_\_\_ Did not discuss ideas
- \_\_\_\_\_ Did not criticize ideas
- \_\_\_\_\_ Everyone contributed
- \_\_\_\_\_ Wrote down repeated ideas
- \_\_\_\_\_ Kept focused on brainstorming
- \_\_\_\_\_ Allowed enough time
- \_\_\_\_\_ Stopped when everyone was finished

Other methods for collecting feedback or assessing the impact of a brainstorming activity would be to assign a discussion about how the process went or assign a written journal entry asking students to share their observations on the process.

## Impact

Using brainstorming as an instructional activity can impact learning through:

- Helping students think outside of the box to come up with innovative solutions and ideas.
- Maximizing the potential to build off of students' diverse experiences, backgrounds, and strengths.
- Building buy-in from others once a solution has been identified.
- Increasing motivation and creating stronger bonds among those in the learning community.

## Things to Consider

For successful implementation of brainstorming, you should consider the following strategies:

- Set ground rules, making sure everyone who participates understands that the goal is to start with outlandish ideas.
- Avoid any criticism until after the free-flowing ideas have all been recorded, to avoid stifling the creativity of any one participant and setting a limiting tone.
- Avoid any reward until after the free-flowing ideas have all been recorded, to avoid group think.
- Provide a relaxing, informal atmosphere that allows for easy conversation, removing potential barriers to contributing ideas that are out of the ordinary.
- Provide a setting that is as unstructured as possible.
- Have one person act as the note-taker and list each idea offered.
- Evaluate ideas at the end of the session by exploring solutions further, using more conventional approaches.
- Minimize distractions.
- Consider using concept mapping to arrange and develop ideas.

## Bibliography

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