

Creative Problem Solving

Defining Creativity and Innovation

Creativity is a process of generating something new that has value.

Innovation is the process of creating something new that has significant value to an individual, a group, an organization, an industry, or a society.

Creative Environments

- Grants idea time
- Insists on trust and openness
- Allocates budget for an appropriate physical environment
- Encourages risk taking
- Keeps conflicts to a minimum
- Recognizes the benefits of playfulness and humor
- Provides a forum for debate
- Keeps red tape to a minimum

Promoting the Ideas of Others

A manager promoting creativity should use the following techniques:

- Always assume the best
- Listen to new ideas
- Allow the freedom to fail
- Encourage creativity
- Maintain consistency

Laws of Problem Solving

These laws serve as guidelines in finding creative solutions to problems.

1. There are no right answers.
2. Be logical.
3. Be outrageous.
4. Challenge the rules.
5. Fail without fear.
6. Have fun!

Mental Roadblocks to Taking Risks

1. **Negativity** — to be creative you must view things as different or interesting, not as good or bad.
2. **Fear of failure** — do not let the fear of a possible failure or ridicule prevent you from expressing creative ideas.
3. **Lack of clarity** — explore ambiguous situations. Look at the problem from many different angles.

Methods of Inspiring Creativity

- **Understanding brain wave states:** The four brain wave states are alpha, beta, theta, and delta. Creativity occurs during the alpha state. Ways to get into this state include journaling, going for a walk, daydreaming, or visiting a creative environment such as a museum.
- **Mind mapping:** a creative method of visually presenting mind pictures and ideas on paper. The act of writing thoughts down to clarify thoughts and makes sure ideas are complete.
- **Using forced connections:** a way of changing the characteristics of an object, situation, or problem. Follow these guidelines to use forced connections.
 1. Clearly state the problem.
 2. List the characteristics of the problem.
 3. List potential solutions to the problem.
 4. List solutions for situations in other fields.

Signs of Groupthink

- The group feels beyond criticism or attack.
- Bad news and outside viewpoints are censored.
- Contradiction to ideas are rejected.
- Beliefs that the group is right and beyond reproach.
- Individuals fear sharing personal opinions with the group.
- Other groups are seen as weak, bad, or stupid.
- Group won't challenge assumptions/ consider alternatives.
- Consensus is accepted too quickly.

Brainstorming Rules

1. No judgments are placed on ideas.
2. All ideas are welcomed.
3. The goal is quantity of ideas.
4. Record all suggestions.

The 7x7 Approach to Evaluating Ideas

1. Place ideas on wall, paper, or board in 7 columns and 7 rows.
2. Combine like ideas.
3. Exclude the impossible.
4. Modify the idea.
5. Defer the idea.
6. Solicit feedback.
7. Classify dissimilar columns.
8. Rank columns.
9. Generalize columns.
10. Rank columns again.
11. Evaluate the results.