

Creativity in Management

Dr. Vinod Sharma

Session Objectives:

- Defining Creativity
- Understanding the importance of being creative
- Developing creativity
- Learning about the techniques to enhance creativity

DEFINITION OF CREATIVITY

According to Webster's Dictionary, creativity is "the ability to create" and to create means, "To cause to come into existence, to bring into being, to give rise to, to portray for the first time." Creativity is a process which results in something new coming into existence. Creative ability is the ability of an individual to use new approaches to solve a particular problem. It is the discovery/invention of an original idea. Creativity is being sensitive to problems, pitfalls, and changes. Creativity can also be defined as the way one approaches a problem or a situation. It depends on what an individual perceives, believes, and analyzes. Finally, creativity is defined as the interaction between opposing forces, like learning and problem solving etc. Creativity is forming a relationship between unrelated situations to create a new solution that will meet specific requirements.

Innovation and Creativity

Innovation is creative ideas put into practice. Creativity is the seed of innovation. There can be creativity without innovation but no innovation without creativity. The process of creativity involves looking for solutions and ideas in the external environment. On the other hand, the process of innovation involves looking to internal resources for implementing ideas. Innovation involves a series of activities. It involves discovering new ideas, selecting the most suitable one, mapping out a plan to put the idea into practice, and obtaining feedback on the implementation.

Nature of Innovation

Innovations can be revolutionary or evolutionary. A revolutionary innovation is the discovery of a new idea.

Example: A telephone was a revolutionary innovation; it changed the way people communicated.

An evolutionary innovation is an improvement upon existing ideas.

Example: A cordless phone was an evolutionary innovation; the evolution from telephone to cordless phones to mobiles is remarkable.

Innovations can be both scientific and managerial. Scientific innovations are innovations in processes.

Example: Computers are a scientific innovation.

Managerial innovations are innovations in management styles, missions, strategies, organizational structures.

Example: Management by objectives is an innovation in management style.

Science of Creativity

According to psychobiology, the human brain is divided into two parts namely left brain and the right brain. The left brain is associated with verbal, logical, and analytical thinking. It excels in naming and categorizing things, representing, speech, reading, writing, and calculating. The right brain, on the other hand, is associated with emotions, intuition, inspiration, and imagination. Hence, it is believed that in

highly creative people, the right brain is dominant.

Creative Personality

A person with the ability to think from different angles is a creative person. Creative persons display sensitivity and curiosity. They tend to be adventurous and are willing to take risks. Creative persons tend to be very independent in judgment and are patient in their efforts. Creative persons tend to be imaginative. They are good at visualizing things, and this gives them a broader understanding of the situation. They can be highly unpredictable and complex.

Mental barriers act as obstructions to creative ideas. A mental barrier affects creativity by filtering out the ideas that are perceived to be dangerous by an individual. These barriers may be fear of failure, fear of criticism etc.

Components of Creativity: The creative ability of an individual depends on four components that are as following:

1. Fluency component: It is the ability to generate a large number of relevant ideas continuously with reference to a particular problem or situation.
2. Flexibility component: It is the ability to view an aspect from different perspectives, to change approaches to problem solving.
3. Originality component: It is the ability to produce unusual, novel answers to questions and interpretations of situations.
4. Orientation component: It is the ability to face challenges thrown by complex situations, to enjoy efforts to analyze and resolve them.

These components are interrelated with the intellectual abilities, knowledge and confidence of the managers.

- Intellectual abilities include the ability to view problems or situations from different angles and the ability to avoid conventional thinking. This ability helps the managers make out which ideas are workable and which are irrelevant.
- For managers to be creative, they must have adequate knowledge about the available courses of action to a particular problem.
- Confidence is vital for being creative. Managers who are confident of their own abilities will generally be more creative.

Stages of Creativity

A creative solution involves coming up with an original and new idea which is of use to the manager. The process of creative idea development has four stages:

Exploring

This stage involves identifying possible courses of action for a given problem or a situation. The managers should identify what they have and what they want. In this stage, they collect all available information about the situation including contradicting and challenging information.

Inventing

This stage involves searching for a variety of tools, techniques, and methods that might help in out-of-box thinking. Different people use different techniques to stimulate creative ideas.

Selecting

This stage involves the analysis of accumulated ideas and information. The managers screen all ideas in

this stage. They analyze the various ideas and discuss them with colleagues. They need to think without prejudice, or emotions, and arrive at a creative solution.

Implementing

The final stage of this process is implementation. Managers decide how to put an idea into practice in this stage. After an idea is implemented, feedback must be obtained on the utility of the idea and based on it, the idea should be modified to meet the requirements.

Creativity in Organizations

With globalization, fierce competition, and reduced barriers, immense pressure is being created on companies to work creatively. Creativity helps organizations gain an edge over rivals. It leads to innovation that results in new products or approaches, and this gives these organizations the competitive edge. Creativity can be developed at the workplace only if there is a supportive organizational culture. Organizations must develop an overall creative work culture. It involves encouraging diverse ideas, new and conflicting thoughts to produce creative and innovative ideas. To encourage creativity, organizations must provide recognition and rewards for the creative efforts of employees.

IMPORTANCE OF BEING CREATIVE

Organizations lose many opportunities due to lack of creativity. Businesses are facing challenges in the form of rapidly changing technologies, severe competition, volatile markets, etc. A creative approach to business would enable them to handle such uncertain situations. Hence, many successful businesses today not only encourage employees to think creatively but also give their ideas serious consideration and look for ways to implement them.

A creative culture identifies new approaches to improving performance, developing new methods, and enhancing growth in the organization. It helps managers in solving problems in an innovative and economical manner. A creative work culture enables proper utilization of resources, thus minimizing wastage of resources. It helps in strengthening the organization's strategic position and in integrating the functioning across various areas in an organization.

Barriers to Creative Thinking

There may be several barriers to creativity in the form of an individual's inherent fears and characteristics. People should identify and overcome these barriers. Some of the common barriers are discussed below.

Fear

The fear of failure is a barrier to creativity. This is the fear of the idea being rejected and it may result in projects getting delayed. People may fear that they will be humiliated and ridiculed and thus abandon a project or an idea at its initial stages and sometimes in its final stages. A fear of exploring and stumbling upon new ideas also hinders creativity.

Anxiety

A creative process has no fixed or desired outcome that makes the managers anxious. Anxiety is a critical barrier to creativity. It restricts the thinking process and reduces creativity.

Pessimism

If people believe that they are not creative or imaginative, then they will never be creative. People's inherent perception of themselves has an effect on their creativity. Confident and optimistic managers will be more creative than pessimistic ones.

Stress

Generally, a creative person works all day to create original ideas. This may result in stress, depression, and anxiety – all of which are barriers to creativity. Stress hampers creativity in an individual. Some managers are likely to find an answer to problems when they are not at work and not even thinking about the problem i.e., when they are least stressed.

Environment

This includes physical, social, economic, and work environments. Each person has a work style and an environment in which he/she feels comfortable working. A manager may not be creative in his/her office cabin and hence may go for a long drive to cultivate creative ideas.

DEVELOPING CREATIVITY

Creativity can be developed by helping individuals develop the qualities of a creative personality, by creating in them a need to innovate. In addition, creativity can be developed by helping people overcome the barriers and mental blocks discussed earlier.

Developing Creative Work Environment

A stimulating, diverse, rewarding, and challenging work environment helps develop the creative thinking ability. An environment in which risk taking and experimentation are encouraged is highly creative. A workplace that communicates the importance of creativity and innovation excels at producing creative work. A motivating environment encourages creativity. It encourages fresh ideas, experiences, and new challenges. This environment enhances creativity, innovation, and experimentation in organizations. An organization should encourage regular feedbacks and constructive criticism. The environment should provide room for constant learning that would stimulate creativity. Creative people who are receptive to new ideas or solutions should nurture and encourage creativity in other employees.

Developing Creativity in Teams

Organizations can develop creativity in teams by providing an appropriate environment. Today's organizations have people from diverse cultures, backgrounds, etc. and this diversity can be used to generate creative ideas. Every employee has the potential to be creative and this potential has to be identified and nurtured. To do this, managers can make use of some systematic tools.

There are many constraints and challenges in developing a creative team. Some teams may consist of members who may have not worked together before. This may result in a cautious and defensive environment in the team. Sometimes, teams include members from different levels of the organizational hierarchy and these members have communication barriers between them. Some team members may not realize the common identity, vision, and objectives of the team. This may result in lack of commitment, which is very important when working in teams. Hence, a manager or team leader should take care to overcome these challenges and build effective and creative teams.

Creative Teams

A creative team should have a common purpose and values. The core values of creativity are curiosity, sensitivity, adventure, judgment, independence, persistent efforts, etc. and these values should be common to all the team members. This acts as a common purpose for the team and enables the members to develop a culture of cooperation. Beyond the core values, members of a team can have diverse opinions. Hence, the team members should be selected based on their diverse thinking.

ENHANCING CREATIVITY

To be creative, organizations need to develop creative and innovation oriented thinking at all levels. They

have to identify key creative and innovative areas to lead changes and innovations and to have a challenging vision of the future integrated with creativity and innovation.

Techniques of Creativity

According to Pradip Khandwalla, the techniques of creativity can be classified as:

1. **Problem decomposition techniques:** These techniques are used to identify the various dimensions of a problem and frame a compatible solution that considers all of them. These techniques ensure that the selected solution is acceptable in a particular situation.
2. **Information search techniques:** These techniques involve searching for information to solve a problem.
3. **Techniques for breaking stereotypes responses:** These techniques involve breaking the regular or conventional thinking pattern. It involves questioning one's own assumptions.
4. **Unblocking techniques:** These techniques involve enhancing clarity of thinking and generating creative ideas by removing the mental blocks.
5. **Mutual stimulation/instigation techniques:** These techniques involve information sharing about unusual ideas among individuals. In these techniques, individuals question each other's assumptions and share information and ideas.
6. **Imaging techniques:** These techniques involve visualizing problems and situations down to the minute details.
7. **Fusion techniques:** These techniques use various combinations of ideas, including those from unrelated areas to frame a creative solution.
8. **Ideating techniques:** These techniques involve generating a large number of ideas. In these techniques, the emphasis is laid on quantity rather than quality of ideas.
9. **Extremization techniques:** These techniques involve encouraging employees to suggest creative solutions that are different from the conventional ones for certain unforeseen problems.
10. **Demolition or dialectical techniques:** These techniques involve counter questioning the feasibility of the selected solution. This process helps to identify the various pitfalls and drawbacks in the solution.

Popular Techniques to Enhance Creativity

Some of the popular techniques for enhancing creativity in a manager are discussed below.

Brainstorming

Brainstorming technique was developed by Alex F. Osborne. In this technique, a specific problem is given to a group of people, along with necessary information on the nature and background of the problem. They are also given the expected nature of the results from the session. At the brainstorming session, idea generation starts with each participant giving one idea at a time. The ideas must be given in turns. A session may have several rounds and it concludes when the participants stop generating ideas. All the collected ideas are then evaluated and classified and the best ideas are selected by casting votes on all the ideas presented. The group leader should facilitate the process by motivating the participants to build on previous ideas.

The four important rules for conducting brainstorming sessions are:

1. Initially when the participants generate a number of ideas, a manager must ensure that there is no

criticism against the ideas or participants.

2. The participants must be encouraged to produce ideas in their original form as they occur to them without modifying them in any way.
3. The emphasis must be on unusual ideas as they remove mental blocks and help in generating a novel idea.
4. The participants must be encouraged to build on each other's ideas. This enables them to stick to the purpose of solving the problem.

Checklist Technique

This technique developed by Alex F. Osborne focuses on asking questions to get creative solutions. In this technique, participants are asked a number of questions to obtain modifications to preliminary solutions that they have found for certain problems. The questions designed by Osborne are as follows:

1. What can we add to the preliminary solution?
2. What can we subtract or delete from the preliminary solution?
 3. What aspect or the component of the preliminary solution can we alter?
 4. How can we rearrange the components of the preliminary solution?
 5. How can we adapt the preliminary solution for other uses?
 6. Can we magnify the preliminary solution or some property of the preliminary solution?
 7. What could be the opposite of the preliminary solution?
 8. Can we minify or miniaturize the preliminary solution or some key aspect of the preliminary solution, say its cost?
 9. Does the preliminary solution have uses other than the present one?
 10. Are their alternative ways or means of producing the preliminary solution?

Pradip Khandwalla uses the first letters of the underlined words which give the acronym 'ASARAMOMOA' in the creativity workshops that he conducts for managers. He believes that asking managers to apply this technique on a product, structure, or strategy and asking provocative questions in a structured manner leads to creativity.

Attributes Changing or Listing Technique

Robert Crawford invented this technique. According to him, creativity is the result of changing and/or modifying the attributes and experimenting with various combinations. This technique can be applied systematically by identifying the immediate attributes and then the distant attributes. This technique involves listing all the meaningful attributes of a proposal, idea, or solution and focusing on ways to improve them. The following table depicts the attribute changing technique.

| Attribute Listing | |
|--|---|
| Attribute Type | Ideas for Improvement |
| Recognize what is happening in a situation. | Gather the required information and facts objectively. |
| Define the situation. | Use unconventional methods to define the situation. |
| Analyze the factors contributing to the situation. | Identify the unusual sources and causes of the situation. |
| Identify alternative options. | Stimulate new ideas and options. |
| Evaluate alternative options. | Develop methods to evaluate new ideas and options. |
| Select the best possible option. | Decide on new ways to solve the situation with other options. |
| Plan to implement the option. | Check for new methods of implementing the options. |
| Obtain a feedback on the new situation. | Prepare new methods to obtain feedback, review and record. |

Morphological analysis

Morphological Analysis is a technique invented by Fritz Zwicky. It is an extension of attribute changing, in which selected alternatives for each chosen attribute are tabulated. Morphological analysis is used to generate a large number of solutions within a short time. The steps in this technique are:

1. The manager defines the situation or problem specifically and clearly.
2. The input factors including the information and facts are identified.
3. A matrix representing all possible solutions is constructed.
4. All the solutions are analyzed and evaluated with the desired outcome as objective.
5. The best solutions identified are analyzed in relation to the resources available.

This approach provides all possible solutions to any given problem. The most suitable of these are selected and analyzed further.

Synectics

According to W.J.J.Gordon, the developer of this technique, Synectics is the process of joining different and irrelevant elements to solve a situation or problem. It is a group technique, in which highly trained people from diverse fields collectively work on a specific situation.

Synectics uses several mechanisms to enhance creativity. The problem is clearly defined to the group and brainstorming is used to generate solutions. If this does not throw up a solution, then the 'Problem As Understood' (PAU) mechanism is used. In this mechanism, each group member describes the problem as he/she visualizes it. For example, a manager may say 'I feel the problem may bounce back like ball hitting a wall'. PAU views the problem in an unusual manner. After several PAUs are collected, the group selects

one PAU for analysis. During this analysis, evocative questioning is used. Evocative questioning involves asking the group to find a similarity from some other field or department. After this questioning, the group is asked to think diversely or to find the differences in the situations. In this process of finding similarities and differences, the group may stumble upon a creative solution to the problem.

Delphi Technique

In this technique, a team of experts deals with a specific issue. These experts should be unbiased in their judgment or opinion. The Delphi technique involves the following steps:

1. A team of 5 to 10 experts headed by a team leader or moderator is given the description of the problem situation.
2. Each of the experts separately list ideas on a paper that are later sent to the team leader or moderator.
3. The identity of the expert making the suggestions or giving ideas remains anonymous throughout the session.
4. The team leader prepares a common list with ideas selected from all the members and sends it again to the team of experts.
5. The experts rank each idea or solution based on their views, knowledge, and experience and send it to the team leader.
6. The team leader then selects an idea that receives the maximum ranking.

For the ideas over which there is no general agreement, the experts are asked to explain the reasons for their diverse opinions. The Delphi technique does not stress on an agreement among the views of the experts – its objective is to narrow down the options. It supports individual creativity in a group. It also helps avoid mental blocks like fear of humiliation and fear of failure, which are common in face-to-face discussions.

Six Thinking Hats

This technique, invented by Edward de Bono in 1980's, is becoming increasingly popular. The six hats represent six modes and directions of thinking. These hats are imaginary and represent the various stages of generating creative solutions. Here wearing a hat means thinking in a way that is not necessarily one's own. Each hat has a different color and each color means a different mode.

In this method, the responsibility of a person wearing a white hat would be to only collect information from all the possible sources. The analysis of such information is done by the person wearing a green hat. People wearing yellow and black hats evaluate the ideas generated by analyzing the information. Team members wearing a red hat select the best idea based on their intuitions. Finally all the team members summarize the process by wearing blue hats.

Depending on the situation or the problem, a creative thinker may use any one of the hats. The types of hats and their significance are given here:

White hat: The white hat involves collection of the necessary information, which should be neutral without any interpretations and analysis.

Green hat: This involves creativity and searching for alternatives. The result of this thinking is generally creative. In this thinking, both the thinker and listener should wear a green hat.

Yellow hat: This involves analyzing the benefits of a proposal. The yellow hat explores the values and benefits of a proposal and then finds ways to support them.

Black hat: This involves judgment, care, and concern. It aims to identify the pitfalls or negative points in a proposal.

Red hat: This involves emotions, feelings, and intuition. The red hat allows a thinker to voice his/her intuition without any need to justify it.

Blue hat: This involves an overview of the proposal. It determines the tasks to be performed. This thinking provides summaries, conclusions, and overviews.

Mind Mapping

This technique was developed by Tony Buzan to stimulate creativity and generate new ideas in an individual. It is a technique which involves the graphical display of ideas and concepts and the inter-relation between them. It can also be used to enhance the productivity of employees in an organization.

In this technique, a manager uses images to represent the problem and the information related to the problem. Following are the basic steps involved in mind mapping.

1. The main problem or situation is clearly defined to a manager or an individual by the team leader.
2. The manager defines the problem using images and displays the problem or situation in the center of a paper using a different color.
3. After highlighting the basic problem, he/she presents the facts, information, and the available alternatives using images, headings, and titles.
4. The manager has to depict the relationship between the basic problem and the various facts by using arrows that are called branches.
5. The relationship between the basic problem and branches should be explained using meaningful headings.
6. All the branches should be related to the basic problem. This results in a network structure.
7. Finally, the manager uses the entire mind map to draw new ideas and solutions.

A mind map should use the following:

- **Images:** Images can be used to express ideas. It may sometimes be difficult to put an idea into verbal form. In such cases, images can be used. The images used in a mind map should be clear and meaningful.
- **Headings:** The mind map should have small explanations in the form of headings. The headings should be explanatory. They should be keywords that generate numerous ideas in relation to the problem.
- **Associations:** A mind map should use arrows to relate the basic problem and facts. These arrows direct the flow of thoughts of the individual.
- **Hierarchy:** A mind map should place the basic problem first and then ask questions like why, when, what, how, where, etc. This results in giving a hierarchy to the flow of ideas.

Lateral Thinking

This technique of thinking was made popular by Edward de Bono. Lateral thinking involves looking for solutions in unusual directions. This kind of thinking uses unconventional approaches to solving problems.

Lateral Thinking Techniques: Some techniques for enhancing lateral thinking are given below:

1. **Identifying Alternatives:** This technique identifies the alternatives and thinking beyond what one perceives as the ideal solution.
2. **Challenging facts and assumptions:** This technique focuses on questioning the facts and assumptions. Sometimes assumptions can act as barriers to creative thinking. So by questioning the assumptions, one can stumble upon ideas that are more creative.
3. **Postponing judgment:** This technique involves postponing judgment of selecting a solution or an idea. The underlying principle, according to this technique, is to continue the thought process and to apply insights to find a more diverse and creative solution.
4. **Negating the obvious:** This technique involves developing lateral ideas about obvious solutions. This technique breaks down the assumptions, fears, and prejudices of a manager.
5. **Focusing on starting and special areas:** This technique involves focusing on the start of the thinking process, and the areas that need special attention. In the creative process, a person tends to jump from one idea to another very quickly and hence lose focus of the problem. This technique helps to avoid such a situation.

Guided Visualization

This technique was developed by Chris Musselwhite and Cheryl De Ciantis. This technique uses graphics or images to express ideas or solutions to a problem. This new mode of expressing thoughts brings to light creative ideas in an individual.

This technique has the following steps

1. Initially the problem or situation is described to the group.
2. Each of the participants or group members is required to express his/her ideas in images by drawing them on a paper.
3. The participants should not use any verbal or text messages in this session.
4. Also the participants should not speak to each other while drawing.
5. After the drawing, each of the participants should explain the images to the group.
6. The explanation given by each of the participants often stimulates new ideas in the group.

Guided visualization helps a group to develop a common viewpoint. It helps the group to look for similarities in the diverse solutions of each of the participants and may give birth to a totally new idea or viewpoint.

Stimulating Creativity in Organizations

Organizations can stimulate the creative thinking process in employees using the following processes.

Reverse Brainstorming

As the name suggests, it reverses the process of brainstorming. This group technique helps to view the accepted solution from the competitors' point of view. It involves the following steps:

1. The accepted or appropriate solution is explained to the group.
2. The participants start by deconstructing the ideas and contradicting the solution.
3. The participants try to attack the solution. In this process, they find out the various drawbacks and pitfalls in the solution.

4. This results in finding a new solution.

Creative Overloading

When a system is overloaded, it looks for creative ways or innovative ways to work. In order to stimulate creativity in an overloaded environment, the task must be divided into smaller activities.

Example: In the late 1970s, with increasing competition in the global business environment, 3M had to accelerate its rate of innovation to sustain its competitive advantage. In 1977, it launched 'Challenge 81' a program that aimed at achieving 25% of the company's annual sales from products that had been in the market for less than 5 years. This 25% was stretched to 30% in the 1990s and the total years in the market were reduced from five to four.

Creative Benchmarking

Creative benchmarking is not just looking at the industry or market leaders' standards but looking for the standards in a more diverse environment. Benchmarking brings to light the pitfalls or gaps in organizational practices. An organization can use the information obtained from benchmarking to fill the gaps and improve the organization rather than just copying what the market leader does.

Example: If a manager of an automobile company is concerned about the customer care in his/her organization, then he/she must look at the service provided by the top hotel in hospitality industry.

Parallel Groups

Two or more groups working on the same situation or problem are called parallel groups. Parallel groups are used to bring in different viewpoints or designs for a particular situation. In this, each of the groups works on the same situation or product. Then the most creative idea or product of the groups is selected and others are rejected. This technique of selecting only one idea and rejecting others creates a very competitive and creative culture in the organization.

Creative Thinking Network

The OZ Creative Thinking Network (CTN) was started in 1986 by seven employees of Dupont Industrial Fiber Division, US. This network was started to understand the importance of creativity at the workplace against the background of pressure in the market place from foreign companies. The members of the Oz Creative Thinking Network meet regularly and share their experiences and ideas. These meetings have speakers who give lectures on creativity, applied creativity, creative problem solving, etc. The CTN also conducts regular workshops to train members in creativity and innovation. These workshops are held under the guidance of a Dupont facilitator. The Oz CTN honors people for creative and innovative ideas.

Stake holders council

A stakeholder is anyone who has a vested interest in the organization. Stakeholders can be both internal and external to the organization. Internal stakeholders include board members and middle and lower level managers. External stakeholders include customers, suppliers, regulatory agencies, trade unions, etc. An organization must form relevant councils for each of these stakeholders. Representatives of these stakeholders must be requested to be part of the relevant councils. Each council should meet regularly, discuss the performance of the organization with respect to their interest, and give suggestions for its improvement. These councils are said to come up with very innovative and creative ideas.

Creative scenario building

Creative scenario building is an extension of the Delphi technique. In this technique, a group of experts is selected whose identity is not disclosed. The problem or situation is clearly defined to the group. Now each of the experts imagines himself/herself in the situation with respect to the future and comes up with scenarios. The scenarios that have been thrown up by the imagination of each expert are then discussed one by one in the group. After the discussion, each expert is asked if he/she wants to modify the scenario

visualized after getting these new inputs. This process of sharing scenarios and modifying them takes place until the scenarios of the experts start to stabilize on common grounds.

Intrapreneurship

Intrapreneurship is developing innovative and creative ideas within an organization. This means that the organizations must pursue all creative ideas and for this, the management must create an environment where the cost of developing creative ideas is minimized. In intrapreneurship, the management encourages creative ideas from both the employees of the organizations and outsiders. If the management feels that there is potential in an idea and that it can be pursued, then an appropriate budget and resources are allocated to the proposer. A senior manager periodically reviews the status of the project. The proposer tests the product in the market. After the development and testing, the proposer makes a presentation about the product to the top management. If the management accepts the proposal, a prototype is developed and investment made in the project for commercialization.

Kaizen

Kaizen is a Japanese term used to describe minor changes and innovations in operations to bring about an improvement in the process. Kaizen is a culture and a form of management which focuses on creativity and innovation in the organization. An organization with this culture values and respects innovation at all levels (including lower and middle levels). In addition to this, the management supports the kaizen culture by setting up quality circles, starting suggestion schemes, etc.

Example: The Singapore Government has started around hundred quality circles called Work Improvement Teams (WIT) in various departments. Each of these departments with WITs is led by a supervisor. This supervisor nurtures and encourages the creative and innovative ideas of his/her team or subordinates. Each WIT has a trained facilitator. These WIT teams come up with many innovative ideas, many of which the Singapore government has implemented for development.

Creativity Training

Creativity can be taught and it enhances the creative performance of the trained individual. Creative training can show significant results when the training is carried out throughout the organization. Creative training should not just focus on stimulating diverse thinking, it should also remove mental blocks such as fear of failure, fear of rejection, or fear of disapproval. It should train the participants in creativity techniques like brainstorming, the checklist method, attribute changing, etc. Some of the training programs focus on systematic problem solving.

Example: The Indian subsidiary of a British company in the gas business used creative training for 'unfreezing' its bureaucratic environment and this enabled the free flow of creative ideas in the company.

Exnovation

Exnovation is the replacement of the old innovations with new ones. An innovation or creative idea that seemed perfect initially may not suit the business situation at a later stage. According to Peter Drucker, organizations should regularly review their practices, policies, and procedures to check if they are acceptable in the present situation.

Example: Continental Airlines, a popular airline firm, made losses in early 1990s. A new management took over the airlines to turn it around. In one of its moves to change the policies, the company burned the 800-page book of rules in public. The new management replaced the 800-page book with an 80-page book.

Summary

- Creativity is the process of creating something novel and appropriate. It is the ability to create or

bring into existence an idea.

- Creativity means bringing an idea into existence whereas innovation is about putting the idea into practice.
- Creative people are very curious, sensitive, adventurous, risk taking, imaginative, and independent in thinking and judgment. They are visionaries and are persistent in their efforts and take unconventional paths.
- The components of creativity are fluency, flexibility, orientation and originality inherent in an individual along with his/her intellectual capabilities, knowledge and confidence.
- Creative thinking involves the exploring, inventing, selecting, and implementing stages.
- Creativity gives an organization a competitive advantage and a unique identity over its rivals.
- An organization that has a creative culture can nurture new ideas, diverse thoughts, and encourage risk-taking nature.
- Some of the barriers to creative thinking are fear, anxiety, pessimism, stress, and environment.
- Many people believe that creativity is inborn and cannot be developed. But by identifying and overcoming the barriers, creativity can be developed in an individual.
- Apart from overcoming the barriers, managers can use certain tools and techniques to develop creative thinking in organizations.
- There are various techniques for creative thinking like brainstorming, attribute changing technique, morphological analysis, and synectics. Creative thinking can be stimulated using lateral thinking, the Delphi technique, and mind mapping.