



249en04

Module 2

CREATIVITY AND INNOVATION

Maximum Marks - 12

Study Hours 30

Creativity is the ability to develop new ideas and to discover new ways of looking at problems and opportunities. Innovation is the ability to apply creative solutions to problems and opportunities in order to enhance people's lives or to enrich society. This module will enable the learners to understand the creativity and innovation. Further, it will help to understand value addition through innovation. Journey of Successful entrepreneurs may motivate the learners. A brief introduction to IPR has been incorporated.

Lesson 4 Creativity: A Necessity for Entrepreneurial Success

Lesson 5 Need for Innovation and Value Addition

Lesson 6 Entrepreneur as an Innovator and Problem Solver



CREATIVITY: NECESSITY FOR ENTREPRENEURIAL SUCCESS

Have you observed your mother in the kitchen? It may surprise you to see her cook dishes in a variety of tastes to satisfy the taste preference of different family members. Creativity is usually a personal talent which lies in the power to do unusual but useful things. Creativity is about seeing and communicating the extraordinary in the simplest, everyday things. So, creativity is crucial for success in business. In simple terms, creativity means to think differently with an input of originality.



LEARNING OUTCOMES

After studying this lesson, the learner will be able to :

- explain creativity and its role in entrepreneurship;
- analyse the techniques for enhancing creativity; and
- identify the barriers to creativity and measures to overcome them.

4.1 CONCEPT OF CREATIVITY

A **creative concept** is a big idea that captures one's interest, influences emotional response and inspires someone to take action. It is a unifying theme that can be used across all campaign messages, calls to action, communication channels and audiences, about the newness of products. Creativity leads to the production of novel and useful ideas within any field.



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4.2 MEANING OF CREATIVITY

Entrepreneurial creativity is defined as the paradigm shift in generation and implementation of novel, appropriate ideas to establish a new venture that results in the improved efficiency or effectiveness of a system. Its two important aspects are process and people.

Process is goal-oriented and designed to attain a solution to a problem. People are the active resources that determine the solution. They will sometimes adapt a solution and at other times, they will formulate a highly innovative solution. As Henry Miller said, “One’s destination is never a place, but a new way of seeing things.”

Creativity begins with a foundation of knowledge, learning a discipline and mastering a novel way of thinking which comes from experimenting, exploring, questioning, assumptions, using imagination and synthesizing information.

4.3 DEFINITION OF CREATIVITY

Some of the important definitions are:

Joseph Schumpeter introduced the economic theory of “creative destruction,” to describe the way in which old ways of doing things are endogenously destroyed and replaced by the new.

Drevdahl says, “Creativity is the capacity of a person to produce compositions, products or ideas which are essentially new or novel and previously unknown to the producer.”

Therefore, creativity is the capacity to produce ideas that are both new and useful through divergent thinking.

4.4 CHARACTERISTICS OF CREATIVITY

- (a) **Imaginative:** Creative thinking starts with imagination as it brings about something that did not exist or was not known before, so it has to be imagined first.
- (b) **Purposeful:** Creative imagination must have a purpose, an objective to serve the responsibilities of the business.
- (c) **Original:** Originality means inventiveness or the ability to think independently and creatively or the quality of being novel or unusual.
- (d) **Valuable:** It means that the product or result must be held in great esteem for admirable qualities especially of an intrinsic value.
- (e) **Ability:** Ability is to imagine or invent something new. It is not only qualification but also need skills to do a particular task in a productive manner.



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4.5 INGREDIENTS OF CREATIVITY

- (a) **Knowledge:** Information about the problems and possible solutions that can help solving problems. It can be gathered from one or more of the four styles, intuitive, innovation, imagination, and inspirational.
- (b) **Motivation:** Entrepreneurial creativity requires a combination of intrinsic motivation and extrinsic motivation. Extrinsic motivation relates to tangible reward whereas intrinsic relates to the job itself.
- (c) **Passionate:** An entrepreneur must be passionate about his ideas and willing to take risk to achieve his objectives.
- (d) **Self-discipline:** Control and ability to overcome failure and rejection is crucial.

4.6 NECESSITY OF CREATIVITY IN ENTREPRENEURSHIP

Globalization, advanced technology and excessive industrialization have created immense business opportunities. Imports and exports have provided easy access to products. So what does a business person do in a market flooded with products? How can someone think of manufacturing and supplying a product in markets where consumers already have their trusted preferences and so many choices? How can we make a product stand out from the rest? The answer to all these lies in creativity and innovation.

Creativity and entrepreneurship go hand in hand. However, both are important to each other and one cannot guarantee success without the other.

1. **Foster Innovation:** Creativity is the heart and innovation, the oxygen for the success of the organization. An idea which is unique is an invention, but an idea which is unique as well as useful, is an innovation. In simple terms, innovation refers to the commercialization of invention.
2. **Leads to Higher Overall Success:** Organisations need creative people. They could bring great benefits if their skills are adequately shaped and harnessed.
3. **Encourages People to Think:** Thinking is a pre-requisite for creativity. Thinking works best when coupled with sharp, highly focused and disciplined way of thinking.
4. **Helps Transcend Boundaries:** Most path-breaking discoveries are made when two or more unrelated disciplines collide in a positive way.
5. **Helps Increase Productivity:** Creativity may result in creative products and services which may increase productivity by creating demand in the markets.



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6. **Help Exploit Employee Potential:** Today's employees are realising that there is an ocean of information and creative ideas that are dormant and untapped at all levels. By encouraging employees to be creative, organisations are essentially utilising the untapped potential.
7. **Development of Creativity:** Creativity is an intrinsic trait with renewable resources that can be tapped anytime and be learned. We are all born with creative potential and thought process which can be developed and reinforced. Inculcating new skills or train mind to think differently leads to creative thinking.
8. **Increased Revenue:** Creativity gives a competitive edge to business to increase turnover as a result of consumers' satisfaction.
9. **Greater Market Share:** Business is selling experiences in addition to products/services, which leads to increase market share or the share of enterprise sales in total market sales.



INTEXT QUESTIONS 4.1

1. State whether the following statements are TRUE or FALSE :
 - (a) Creativity is the heart of entrepreneurship.
 - (b) Extrinsic motivation relates to tangible reward.
 - (c) Economic theory of creative destruction was proposed by Joseph Schumpeter.
2. Fill in the blanks:
 - (a) An entrepreneur must beabout his ideas and willing to take risk.
 - (b) Creativity gives a competitive edge to business to increase turnover as a result of consumers'
 - (c) The creative imagination must have a....., an objective to serve the responsibilities of the business.
3. Choose the correct answer:
 - (a) Which of the following is not a feature of creativity?
 - (i) Originality of ideas
 - (ii) Knowledge
 - (iii) Ability
 - (iv) Imagination



- (b) When the share of enterprise sales is more in total market sales, it is said to be:
- (i) Increased revenue
 - (ii) Increased profits
 - (iii) Market share
 - (iv) All of the above

4.7 TECHNIQUES OF ENHANCING CREATIVITY

Creativity techniques provide an introduction to a range of tools and techniques for both idea generation (creativity) and converting those ideas into reality. To increase the creative power of an individual and group, some important techniques are:

1. **Brainstorming:** This technique was developed by Alex F. Osborn in 1957. Brainstorming means, a team of members generates a large amount of alternative fruitful ideas on a specific problem without any criticism and then evaluates each idea with pros and cons. This is done with the active cooperation of team mates and the chairperson, and makes a comprehensive checklist to eliminate the ideas that are clearly unworkable but retain all that is worth further consideration.



Each idea is to be considered in the light of points like, does it meet the objectives, does it solve the problems, does it introduce new problems, will it fit in with current systems and can it accommodate growth. The purpose behind group creative technique is to provide each other's information as input for further stimulation.

Brainstorming may be of the following ways:

- (a) **SCAMPERR:** This is developed by Micheal Michalko. It seeks to undertake the following checklist to arrive at a new idea. The word is an acronym.

'S' stands for Substitute, which means, can we substitute components, materials, people.

'C' stands for Combine, which means, can we mix, combine with other assemblies or services, or integrate.

'A' stands for Adapt, which means, can we alter, change function, use part of another element.



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'M' stands for Magnify, which means, can we make it enormous, longer, higher, overstated, with added features.

'M' stands for Modify, which means, can we increase or reduce in scale, change shape, modify attributes (e.g. colour).

'P' stands for Put to another use, which means, can we this product by put to any other use.

'E' stands for Eliminate, which means, can we remove features and simplify. (e.g. auto focus camera)

'R' stands for Rearrange, which means, can we rearrange the features and see the results. (e.g. Tata Nano has the engine on its rear)

'R' stands for Reverse, which means, can we turn reverse the order that is being followed now.

So, whenever a new product or services are to be launched or the existing one is to be improved, these questions on the checklist are asked and suitable changes are implemented.

(b) **Road Bridge** – Take the example of a congested road bridge which makes a good theme for a brainstorming session. There are many conceptual similarities between traffic and process flows. Thinking about road traffic problems should also remind us to consider social, political, economic and environmental factors when creating solutions. Many solutions fall into one of the following classes:

- Speed up the flow
- Reduce the flow
- Divert the flow

(c) **Six Thinking Hats:** This technique was developed by Edward de Bono. This technique advocates thinking about a problem or opportunity not by one perspective but by six different perspectives. In this technique people are asked to wear different coloured hats and think and respond based on the perspective that colour represents. This help avoiding disagreement amongst people who come from different background towards a problem or opportunity. The hats and its colour represents the following:

- **White hat: neutral** the person wearing white hat focuses on available data. The idea is to analyse past trends which are extrapolated.
- **Red hat: fire, warmth** this approach uses feelings, emotions, intuition, hunches to address a problem.
- **Black hat: caution** indicates discernment which shows legality, judgment,



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morality. This approach looks at all the bad points identifying how this will/may not work. This makes the plan toughens and resilient.

- **Yellow hat: sunshine** indicates optimistic response, positive benefits. This approach uses optimistic viewpoint identifying all the benefits and gives a sense of encouragement.
- **Green hat: growth** stands for creativity and a creative solution to a problem is developed.
- **Blue hat: sky** focuses on process control and used by chairperson of the meeting who directs people to act accordingly, allows giving equal time to everyone and taking notes wherever necessary to build consensus.



Six Thinking Hats

2. **Mind-mapping:** This technique was developed by Tony Buzan and is also called spider diagram drawn to represents ideas and notes in continuous tree-diagrams. Mind maps are drawn on paper or a white board. The starting point is the central idea written at center of a large paper or white board representing the theme for which the mind-map is to be drawn. Then, subtopics are written as an extension of the main topic representing a separate branch of the tree emerging from the central topic. Further the same way keeps adding sub-topics and next levels finer sub-branches. Ideas can be put at more than one place and then be linked to show relationships and also using colour pencils further relationships van be shown.
3. **Lateral thinking:** This term was coined in 1967 by Edward de Bono who suggests that solutions to problems can be found by unorthodox methods. When a problem is presented, the audience is asked to think laterally as to how similar problems are solved in different settings. Thus, lateral thinking means, leaving behind traditional modes of thought and throwing away preconceptions. It is a method of solving problems through an indirect and creative approach.



INTEXT QUESTIONS 4.2

1. State whether the following statements are TRUE or FALSE:
 - a) Blue hat represents sky which focus on process control.
 - b) Green hat stands for growth which focuses on creative solution to a problem.



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- c) Six Thinking Hats technique was developed by Edward de Bono.
- d) A Road Bridge technique can be applicable to solve the problem of congestion of road bridge.

2. Fill in the blanks:

- a) When the solution to the problems can be found out by unorthodox methods, it is known as.....
- b)means leaving behind traditional modes of thought and throwing away preconceptions.
- c) The term, lateral thinking was coined by.....
- d)are drawn on paper or white board.
- e) SCAMMPERR technique is concerned with.....
- f) approach uses optimistic view point identifying all the benefits and gives a sense of encouragement.

3. Match the following:

<i>Column A</i>	<i>Column B</i>
(a) White hat	(i) Focuses on process control
(b) Red hat	(ii) Focus on available data. The idea is to analyse past trends which is extrapolated.
(c) Blue hat	(iii) Indicate discernment which shows legality, judgement, morality.
(d) Green hat	(iv) This approach uses optimistic viewpoint identifying all the benefits and gives a sense of encouragement.
(e) Yellow hat	(v) Stands for creativity and a creative solution to a problem is developed.
(f) Black hat	(vi) This approach use feelings, emotions, intuition, hunches to address a problem.

4.8 HINDRANCES TO CREATIVITY

Hindrances are the rumble strip on the road of creativity. There are certain circumstances where creativity, the outcome of the human mind, can be hindered.

**1. Environmental Hindrances:**

- a) **Reliance on experts:** The first rule in working with experts is to stop asking them to solve your problem as they use jargon which you may not understand. Get them to point you in the right direction for the resources you need to understand the system. The expert may be misaligned and may be burdened by the curse of knowledge.
- b) **Lack of committed resources:** Committed resources are acquired in advance for multiple periods before the demand for resources is known. This is also known as economic barriers which are capital, labour and raw material.
- c) **Top-down decision making:** Top-down approach of decision making in which actions and policies are initiated at the highest level. Keep it hierarchical with the assistance of black boxes which makes it easier to manipulate.
- d) **Too much cooperation:** Too much cooperation leads to conflict, group thinking, social loafing and communication breakdown. Sometimes, too much cooperation can prevent the team's best ideas from being shared.
- e) **Too much competition:** unhealthy competition or cut throat competition are nightmares. They are capable of creating a win or lose situation.

1.1. Measures to overcome environmental hindrances:

- i. **Change in Attitude:** Positive attitude of entrepreneurs helps in getting success.
- ii. **Economic environment:** It includes economic stability and trade cycles. Economic environment is an uncontrollable factor for entrepreneurs but it can be predicted to some extent by observing the stability of government policies like industrial policy, licensing policy, fiscal policy and financing policy.
- iii. **Business environment:** It includes working conditions, and competition which affect entrepreneurship development in the country. Working condition can be improved by making strict regulations. Competition cannot be eliminated but can be controlled to be healthy.
- iv. **Decision-making:** Decision-making should be quick and contribution of all the level of authority is solicited specially those who are responsible and accountable for delegation of authority is indispensable.



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2. Tactical Hindrances:

A tactic is a plan to take advantage of opportunity or to manage risks as they happen. It deals with day-to-day realities to seek gain or avoid losses.

- a) **Lack of ideas generation skills:** Ideas may come and go frequently but we are not to tap the right idea which has the strength to convert into opportunities.
- b) **Undirected problem-solving techniques:** Generally, solving any problem has set process like, first understand the problem, then devise a plan or translate the problem towards a solution, carry out the plan or solve the issue and lastly, look back or check and interpret the process you followed. This is used all over to aid people solve their problems. The violation from the set path will complicate the problem.
- c) **Poor execution of techniques:** Execution refers to getting things done. Poor execution can ruin all efforts. It may be because of lack of leadership, too much or too little delegation, and unproductive meetings.
- d) **Lack of follow up:** Revisiting a decision, getting a feedback, monitoring, measuring effectiveness are the ways for follow up. A person who does not pay attention to these will prove lack of experience.

2.1 Measures to overcome tactical hindrances:

- i. **Idea generation and idea validation:** A passionate entrepreneur will automatically develop skills in the task domain. This includes knowledge of the problem area and the technical skills required in solving it. The entrepreneur will also verify whether or not the idea is realistic and has useful application.
 - ii. **Assessing outcomes:** Execution of ideas after evaluating pros and cons will derive goals. Monitoring and getting feedback at every stage of the operation is vital, without which, desired result is not possible.
3. **Personal Hindrances:** Few people take up entrepreneurship as a career. Even among the societies which are considered entrepreneurially progressive, only a select few dare to set up their own business due to several reasons. Some of these reasons are:
- a) **Lack of confidence:** Self-confidence refers to the trust or faith in your own abilities. Lack of confidence means you feel weak, insecure and powerless due to lack of knowledge, skills and abilities.



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- b) **Need for conformity:** People have a strong need to conform to individual as well as socially accepted standards, conventions, rules, or laws. Straying from the same may risk social rejection.
- c) **Habit thinking:** Habit thinking means a set way of thinking which tends to occur subconsciously.
- d) **Dislike of uncertainty:** The world of business is full of uncertainty because of its unpredictable nature. If you dislike uncertainty, you will have fear being creative.

3.1 Measures to overcome personal hindrances:

Many personal skills are required for entrepreneurial development. These include technical knowledge, common sense, managerial capacity like planning, organizing, directing and controlling and humane behaviour. They help create a strong entrepreneurial culture.



INTEXT QUESTIONS 4.3

1. State whether the following statements are TRUE or FALSE
 - a) Hindrances are the support in the way of creativity.
 - b) If you dislike uncertainty, you will fear being creative.
 - c) Self-confidence means the trust or faith in you with respect to abilities.
2. Fill in the blanks with appropriate words:
 - a) A set way of thinking which tends to occur subconsciously because of which people fail to think differently as per need of hours is called as.....
 - b) Sometimes, too much cooperation can.....the team’s best ideas from being shared.

3. Match the following:

Column A	Column B
(a) Lack of committed resources	(i) Environmental hindrances
(b) Need for conformity	(ii) Tactical hindrances
(c) Lack of follow up	(iii) Personal hindrances



WHAT YOU HAVE LEARNT

1. Creativity is not only desirable and essential but also vital for the success in the present fast- changing business scenario where customers are treated as king.
2. Entrepreneurial creativity gives competitive edge over others whereas for customers it increases the level of satisfaction and feeling of superior being use of new distinct featured product.
3. Awareness about ingredients of creativity is indispensable. These are knowledge, motivation, passion and self-discipline.
4. The focus points of creativity by the entrepreneur are customers, unique and relevant product and services to the market, acceptance of failure, diverse talented pool and frugality.
5. There are certain techniques through which useful creative ideas can be developed but the most important technique is brainstorming which is widely used in business circles.
6. Creating creativity is not job. It has some barriers which discourage creativity. These are environmental hindrances, tactical hindrances and personal hindrances.
7. Hindrances can be removed by suitable positive measures to boost creativity in the organization with respect to people and processes.



Notes



TERMINAL EXERCISE

1. What is entrepreneurial creativity?
2. What do you mean by ability?
3. What is meant by originality of imagination?
4. What are the ingredients of creativity?
5. What is lateral thinking?
6. What do you understand by brainstorming?
7. What is mind mapping?
8. One's destination is never a place, but a new way of seeing things. Explain.

**Notes**

9. Describe the necessity of creativity in entrepreneurship.
10. Explain environmental hindrances and measures to overcome them.
11. Explain tactical hindrances and measures to overcome them.
12. Explain personal hindrances and measures to overcome them.

**ANSWER TO INTEXT QUESTIONS****4.1**

1. (a) True (b) True (c) True
2. (a) Passionate (b) Satisfaction (c) Purpose
3. (a) (ii) (b) (iii)

4.2

1. (a) True (b) True (c) True (d) True
2. (a) Lateral thinking (b) Lateral thinking (c) Edward de Bono
(d) Mind maps (e) Brainstorming (f) Yellow hat
3. (a) (ii) (b) (vi) (c) (i) (d) (v) (e) (iv) (f) (iii)

4.3

1. (a) False (b) True (c) True
2. (a) Habit thinking (b) Prevent
3. (a) (i) (b) (iii) (c) (ii)

DO AND LEARN

1. You probably watch television regularly. Make a team of three people and choose at least three different advertisements of daily use products. Write down the points of creativity used in that product and its messages or appeal.
2. Of late, it is said that the Indian automobile sector is in the grip of recession. Apply six hat technique of brainstorming to identify the causes and its solution.

CONCEPT MAP

