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NEED FOR INNOVATION AND VALUE ADDITION

Globalisation of the world economy created a paradigm shift in the world business scenario. Today, the entire world is the customer of global products manufactured in different countries. It has created the need for innovation to have a competitive edge over competitors. The leading companies must have innovative approach for the future challenges which differentiates them from the followers. Innovation is quickly becoming a survival skill. The saying, “Necessity is the mother of invention,” throws light on the fact that lack of something can inspire someone to imagine and create something to fill that space. However, not all people believe that this is true. They think that too much of something can lead to an invention. Many inventions are just a variation of something that already exists. Peter F. Drucker rightly said, “*The purpose of a business is to create customers; profit simply validates the business model.*”



LEARNING OUTCOMES

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

- explain the meaning of innovation;
- differentiate amongst idea, invention and innovation;
- discuss the role of creativity for innovation and value addition; and
- describe the use of Intellectual Property Rights in the enterprise.



Notes

5.1 IDEA, INVENTION AND INNOVATION

When you see a mouse in your kitchen, you realize it can harm or damage eatables there. You quickly start finding ways to trap the mouse. If you do not have a mouse trap at home, you try to come up with other ways to guide the mouse out or to trap it. This example shows how necessity generates ideas. Depending on your creativity, you may come up with multiple ideas to rid your kitchen of the mouse. You may also think of fabricating a mouse trap using your ingenuity in what is popularly known as the *jugad* system. If you are successful, then you have actually solved a real problem by your inventiveness. If you think of commercializing the *jugad*, what you have invented will be known as innovation.

5.1.1 Idea

An idea or a business idea is centered on a product or service which can be offered in the market for financial gains. An idea is basic for the business without which nothing can move ahead, not even setting up the business. A person may have multiple ideas. Not all ideas are worth giving thought to. Only feasible and viable ideas have the strength to get converted into business.



5.1.2 Invent

To invent is to develop a new thing that did not exist. It can be a product or a service that provides a solution to the consumer's problem. Invention means to create a product of one's own ingenuity or experimentation for the first time. An **invention** is a "unique or novel device, method, composition or process." Thus, an invention is a new thing that someone has made. Examples of inventions are product designs, business models, or working prototypes. Specifically, it includes inventions like the Wright Brothers' aircraft, the Integrated Circuit by Jack Kilby and the Apple II computer introduced by Stephen Wozniak.





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5.1.3 Innovation

Innovation is the manner in which the entrepreneur searches for new opportunities or presents it in a way that turns ideas into profits. The test on innovation lies in its success in the marketplace of ideas, rather than in its novelty alone. Innovation is the process of transforming creative ideas into useful products, services or methods of operation. In other words, innovation allows you to commercialize invented products. Therefore, innovation can take place in many aspects of business like:



- a) **New products** like smartphones, air purifiers
- b) **New production methods** like pre-packaged sandwiches
- c) **New markets** like Snickers/Mars ice cream
- d) **New organisational structures** like Dell
- e) **New sources of supply** like drop shipping
- f) **New way of doing business** like connecting all products and services under one application viz. Swiggy, Ola etc.

5.2 CONCEPTS OF INNOVATION

Generally, innovation includes three concepts:

- a) **Creativity:** It is the act of producing a new, useful idea, approach or action. Creativity is not just to think out of the box but to imagine that there is no box! Creativity involves the development of unique or novel responses to problems and opportunities such as e-ticketing and e-banking.
- b) **Improvements:** Generally speaking, the main purpose of innovation is to improve people's lives. This refers to continued efforts to do better on an existing machine or product, or find alternate means of achieving a process. Example: Making RO purifiers technologically advanced with a copper element.
- c) **Inventions:** Invention rights owners can produce products. An invention is a more mature part of the idea process. It is more tangible and easily defined; it can be patented or licensed. Example: Development of air purifiers.

5.2.1 Measuring Innovation: It can be measured in degrees.

- a) **Imitation:** Least degree of innovation. Takes another's idea and replicates it in a different market.



Notes

- b) **Incremental:** Moderate degree of innovation. Takes existing offer and makes it better in quality, speed, and in affordability. This is also known as evolutionary or continuous innovation.
- c) **Radical:** Greatest degree of innovation. Rejects the existing way and creates a completely different way of doing business. Also known as revolutionary, trans-formative or a paradigm shift.

5.2.2 Types of Innovation

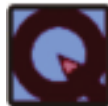
- 1 **Disruptive innovation** represents a new product or service that enters at the low end of the market and gradually moves up-market, displacing existing, established products. The change driving this disruption may, in itself, be a minor or incremental technological innovation.
- 2 **Radical innovation** represents a major technological breakthrough.
- 3 **Discontinuous innovation** is a new technology applied to solve an existing need in a new way. The HP Inkjet printer is the classic example here, having displaced earlier impact print head technologies with a new and better way to put ink on paper.
- 4 **Breakthrough innovation** is an “out-of-the-blue” solution that cannot be compared to an existing solution. Stereo lithography, or Three-dimensional printing, applied to model creation would be a good example here.

5.2.3 Importance of Innovation

- A. **For an organisation:** Innovation can deliver significant benefits to an organization. It is one of the critical skills for success in any business.
 - i. **Competitive advantage:** Innovation gives competitive edge over competitors. Product, services, method, process can all be innovated.
 - ii. **Maximize ROI:** Increased competitive advantage and continuous innovation often have a direct impact on performance and profitability.
 - iii. **Increased productivity:** Economic growth is driven by innovation and technological improvements, which reduce the costs of production and enable higher output.
 - iv. **Positive impact on company culture:** Innovation has a positive impact on company culture as it increases the ability to acquire, create and make the best use of competencies, skills and knowledge.
 - v. **Boost employee morale :** An organisation which gives freedom to employees to innovate, is often characterised by high morale.



- B. For society:** Innovation is important to the advancement of society as it solves social problems and enhances society's capacity to act. From society's perspective, the fundamental outcomes of innovation are:
- i. Economic growth:** Technological innovation is considered a major source of economic growth. The purpose of innovation is to **come up with new ideas and technologies that increase productivity and generate greater output with the same input.**
 - ii. Future of jobs:** Technological advancement and increased productivity result in increase in GDP which means major changes for careers.
 - iii. Increased well-being:** In general, innovation and economic growth increases well-being because living standards rise.
 - iv. Reduced sickness, poverty and hunger:** Developing countries depend on innovation in new digital technologies and innovative solutions create huge opportunities to fight sickness, poverty and hunger in the poorest regions of the world.
 - v. Resource Optimisation:** Helps save resources by utilising them in the best possible way.
 - vi. Environmental sustainability:** Sustainability and environmental issues such as climate change are challenges that require a lot of work and innovative solutions now and in future. Example: Innovation of paper bags leads to reducing use of plastic bags.



INTEXT QUESTIONS 5.1

1. State whether the following statements are TRUE or FALSE:
 - a) An invention is a unique or novel device, method, composition or process.
 - b) Innovation leads to invention.
 - c) Innovation is the process of transforming creative ideas into useful product, service or method of operation.
2. Fill in the blanks:
 - a) The purpose of innovation is to come up with new ideas and technologies that increase.....
 - b) Organisations which give freedom to employees to innovate, often witness high.....



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- c) Technological advancement and increased productivity result in increase in.....
- d) Rejecting the existing way and creating a completely different way of doing business isdegree of innovation.

5.3 DIFFERENCE BETWEEN IDEA AND INVENTION

| Idea | Invention |
|---|--|
| 1. An idea is mind’s eye or mind’s image | 1. An invention is a novel method composition or process. An invention is a unique or novel device, method, composition or process |
| 2. Ideas aren’t patentable | 2. Inventions are patentable. |
| 3. An idea is the outcome of your imagination is an unproven concept that comes from your imagination | 3. An invention is next step to prove your idea. Invention is the result of that idea percolating and traveling the long road towards fruition. |
| 4. An idea just a theoritical concept which needs to be proved. An idea is generally theoretical in nature and needs to be proved either with a solution or a prototype. | 4. An idea does not automatically become an invention unless it is developed to provide a solution. An invention is the extension of the idea that is developed. You can’t just focus on the invention if you don’t explore the idea |
| 5. An idea gives solution for a problem in an innovative manner which you derive through a thoughtful process or by experience. It’s a light bulb moment that helps you solve a nagging problem that’s been in the back of your mind. | 5. An idea converts into invention when it proves it can solve a problem in a unique way. For an idea to become an invention, it needs to follow the path of most resistance. |

5.4 DIFFERENCE BETWEEN CREATIVITY AND INNOVATION

| Basis | Creativity | Innovation |
|-------------------|--|---|
| Meaning | Creativity is the act of creation of new ideas | Innovation is the implementation of invention effectively into market |
| Process | Imaginative | Productive |
| Quantifiable | No | Yes |
| Money consumption | No | Yes |
| Risk | No | Yes |

5.5 DIFFERENCE BETWEEN INVENTION AND INNOVATION

| Basis | Invention | Innovation |
|--------------------|---|---|
| 1. Definition | <ul style="list-style-type: none"> ● New things that are made or created are called inventions | <ul style="list-style-type: none"> ● Commercialization of invention is innovation |
| 2. Objective | <ul style="list-style-type: none"> ● To solve a typical problem ● To make a better useful product ● To fulfill a gap in the market ● To make a business out of it | <ul style="list-style-type: none"> ● To grow and succeed business ● To earn profits |
| 3. Patent | Inventions can be patented or licensed. | <ul style="list-style-type: none"> ● Produced products may not be patented or licensed |
| 4. Value creation | <ul style="list-style-type: none"> ● An invention may not create positive value | <ul style="list-style-type: none"> ● Has been adopted and proven to create positive value |
| 5. Required skills | <ul style="list-style-type: none"> ● Primary scientific skills | <ul style="list-style-type: none"> ● Broad set of strategic, marketing and technical skills |

5.6 VALUE ADDITION: CONCEPT

Value addition literally means, adding value to a product or services. An activity is considered value-added when the customer is willing to pay extra money for the additional output.

What creates added value?

- Quality: Does the product/service meet or exceed the customer’s expectation?
- Functionality: Does it fulfill the required functional needs?
- Form: Is it useful?
- Place: Is it at the right place?
- Time: Is it right in time?
- Ease of Possession: Is it possible for the customer to purchase?

5.6.1 Types of Value:

The art of creating added value starts with the ability to see your business through the eyes of your customers. The value addition can be of the following types:



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- a) **Functional Value:** Functional values or tangible values are physically presented or can be seen in a more visualised way, experienced or measured in some kind of process. Functional value refers to core characteristics of goods that could fulfill a person's practical needs such as possession, psychical attributers, reliability, ownership of a product etc.
- b) **Emotional Value:** Emotional values or intangible aspects are values that evoke positive feelings about a brand and product to motivate purchase. Emotional values are most appropriate for B2B and include attributes such as trust, peace of mind, security and credibility.
- c) **Expressive Value:** Expressive value is the way of thinking about the aspects of culture that are drawn on and used to commodify and circulate such products. These values are:
 - i. **Aesthetic value** includes beauty, harmony, and form.
 - ii. **Social value** includes community, duty, justice, and security.
 - iii. **Spiritual value** includes insight, awareness, truth, wonder and oneness. India's interesting religious mix of Hindu, Mulsim, Shikh, Buddhism, Christianity and Confucianism are sources of cultural dynamism that the country is working through socially and exporting as well.
 - iv. **Historical value** includes identity, time and continuity.
 - v. **Individuality** includes accomplishment, creation, redemption and validation.

5.6.2 Role of creativity for innovation and value addition

Creativity is the source of innovation and value addition. Creativity leads to innovation and innovation ensures value addition. The key benefits to a business from innovation and adding value include:

- a) Charging higher price resulting increased revenue and profits
- b) Creating point of difference from the competition
- c) Protecting from competitors trying to steal customers by charging lower prices
- d) Focusing a business more closely on its target market segment
- e) Increased market share
- f) Competitive advantages with regards to logo on its products, packages, markets and how it delivers its products have competitive advantage over others and can sell its products at a much higher price.



Notes



INTEXT QUESTIONS 5.2

1. State whether the following statements are TRUE or FALSE:
 - a) Inventions are patentable.
 - b) Innovation has been adopted and proven to create negative value.
 - c) Value addition can be understood better when you see your business through the eyes of a competitor.
2. Choose the correct answer:
 - A. Which of the following way shows how value addition is done?
 - a. Increased profits
 - b. Increased turnover
 - c. Increased market share
 - d. All of the above
 - B. Spiritual value includes
 - a. Insight
 - b. Awareness
 - c. Truth
 - d. All of the above

3. Match the following:

| Column A | Column B |
|----------------------|--|
| (a) Functional value | (a) intangible aspects |
| (b) Emotional value | (b) tangible aspects |
| (c) Historical value | (c) identity, time, and continuity |
| (d) Aesthetic value | (d) includes community, duty, justice and security |
| (e) Social value | (e) includes beauty, harmony and form |

5.7 INTELLECTUAL PROPERTY RIGHTS

The knowledge of Intellectual Property (IP) rights is a must in today’s world. Intellectual Property refers to copyrights, patents, geographic indications, trademarks and other intangible assets.

IP rights:

- a) Provide incentive to the individual for new creations

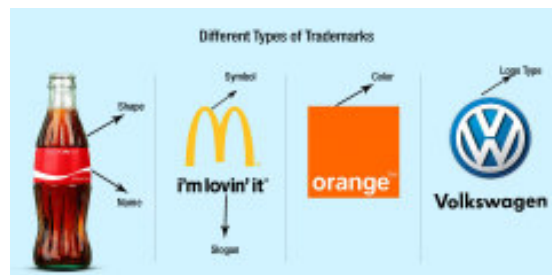
- b) Provide due recognition to creators and inventors
- c) Ensure material reward for intellectual property
- d) Ensure the availability of the genuine and original products

Intellectual Property Law comprises of the following laws:

- (1) Laws relating to Trademarks (Trade Marks Act, 1999)
- (2) Laws relating to copyright Artistic Work, Literary Work, Audio Video Records and Software(Copyright Act, 1957)
- (3) Laws relating to Industrial Designs (The Designs Act, 2000)
- (4) Laws relating to Patents (The Patent Act, 1970)
- (5) Laws relating to Geographical Indications. (Geographical Indications of Registration and Protection Act, 1999)

5.7.1 Trademark

It means any word, name, symbol or device or any combination used or intended to be used in commerce to identify and distinguish the goods of one manufacturer or seller from goods manufactured or sold by others. Symbols used for



trademark are as ®, ! , ™. A registered trademark is symbolized by ®. A trademark is valid for 10 years from the date of application which may be renewed for further years on the payment of prescribed fees.

5.7.2 Copyright

Copyrights are provided for items like literary, musical, artistic works like songs, musical scores, poetry, paintings, sculpture, films, architecture, maps, technical drawings, computer programs, data base etc. Copy right is provided to the creators by providing exclusive right to the creator to use or authorize others to use their works. The reproduction in various forms, copying, printing, recording, public performance or adaptation are prohibited. A copyright protects a tangible form of expression, rather than the idea or subject matter itself. Symbols used for copyright are © + name + year. For



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example, © Himalaya Publishing House, New Delhi, 2009. Duration of copyright is author's lifetime and then 50 years from the end of calendar year in which author dies. It is 50 years for film and sound recordings and 25 years for typographical arrangements of a published edition.

5.7.3 Patent

Patent is defined as the “grant of a property right to the inventor,” providing the owner “the right to exclude others from making, using, offering for sale, selling, or importing the invention.” Patentable items may include objects or processes such as new technology or business methods, but excludes more abstract items such as web sites or ideas. Terms of the patent are 20 years from the date of filing of all types of invention. Patent rights are territorial. There is no global patent.

5.7.4 Design

The Designs Act, 2000 for protection of the overall appearance of the product resulting from one or more visual features. Visual features encompass the shape, configuration, pattern and ornamentation of the product but do not extend to functionality. A design may consist of three-dimensional features, such as the shape or surface of an article, or of two-dimensional features, such as patterns, lines or colour. Even traditional craft items like hand-woven carpets and cotton bed covers can also be registered for protection as an industrial design.

5.7.5 Geographical Indications

The Geographical Indications of Goods (Registration & Protection) Act, 1999 is about indications and appellations of origin. It has signs used on goods that have a specific geographical origin and possess qualities, a reputation or characteristics that are essentially attributable to that place of origin. Most commonly, a geographical indication includes the name of the place of origin of the goods like Basmati rice of Dehradun, Darjeeling tea etc. so the product can be protected by laws and international agreements because they are the geographical indicators of source.

5.7.6 Trade Secret

A trade secret is a formula, process, device, or other business information that companies keep private to give a business advantage over business competitors. Intellectual property examples of common trade secrets include manufacturing processes, client lists, ingredients, systems, sales methods, launch strategies and business plans. Trade secrets are not registered with a governmental body.

It is a fact not publicly known and of which the owner has taken reasonable steps to maintain secrecy.

5.9 IMPORTANCE OF IPR

You may be surprised to know how your business can be protected by IPRs. Securing and protecting your IP could be essential to the future success of your business, so it is vital to understand your rights and how the law can help you. IPRs are important because they can:

- i. protect against infringement by others and ultimately defend in the courts your sole right to use, make, sell or import it
- ii. stop others using, making, selling or importing it without your permission
- iii. earn royalties by licensing it
- iv. exploit it through strategic alliances
- v. make money by selling it

Infringement constitutes: (a) any reproduction, use, distribution, performance, etc. of the work without the permission of the author/owner, (b) an identical or substantially similar production.



INTEXT QUESTIONS 5.3

1. Choose the correct answer:

| Column A | Column B |
|----------|--------------------------|
| (a) © | (a) Registered Trademark |
| (b) ™ | (b) Copyright |
| (c) ® | (c) Trademark |

2. Multiple choice questions:

- (a) Intellectual Property Rights protection is critical to
 - (i) fostering innovation
 - (ii) creativity
 - (iii) imagination
 - (iv) empathy



Notes



- (b) The right which grants protection to the unique expression of ideas is called:
- Trademark
 - Patent
 - Copyright
 - All of the above
- (c) Which of the following is an example of copyright?
- © Himalaya Publishing House, New Delhi, 2009
 - Himalaya Publishing House, New Delhi, ©, 2009
 - 2009, ©, Himalaya Publishing House, New Delhi
 - Himalaya Publishing House, ©, 2009, New Delhi
- (d) Which of the following is an example of trademark?
- Name
 - Logo
 - Symbol
 - All of the above
- (e) A patent describes:
- an invention
 - creativity
 - expression of ideas
 - a design



WHAT YOU HAVE LEARNT

- An idea is a personal view or your intention which may also called as a mind's eye or mental image. Generally, the sources of new ideas are: consumers, existing products and services, distribution channels, (federal) government, research and development.
- Creativity does not merely mean only to think differently. It is more concerned with possible solutions to a problem. Creativity is learned through practice and the development of long-term creative potential depends on experience.



Notes

- An **invention** is a unique or novel device, method, composition or process that allows you to produce or manufactured goods. It may be registered.
- Innovation means commercialisation of a creative invention which occurs if someone improves or makes a significant contribution to an existing product, process or service.
- Value addition means adding some features in terms of functional value, emotional value and expressive value in existing products or services to reap the business opportunities.
- Intellectual Property Rights (IPRs) are legal rights that protect creations and/or inventions resulting from intellectual activity in the industrial, scientific, literary or artistic fields. The most common IPRs include patents, copyrights, marks and trade secrets.



TERMINAL EXERCISE

1. Name the source of generation of new ideas.
2. Define innovation.
3. What is creativity?
4. What is intellectual property?
5. Explain functional value.
6. What do you mean by value addition?
7. What is the use of copyright?
8. Discuss the benefits of innovation.
9. How is innovation helpful in solving social problems? Explain.
10. Differentiate idea, invention and innovation.



ANSWER TO INTEXT QUESTIONS

5.1

1. a. True b. False c. True
2. a. Productivity b. Morale c. GDP d. Greatest



Notes

5.2

1. a. True b. False c. False
2. A. (iv) B (iv)
3. 1. b 2. a 3. c 4. e 5. d

5.3

1. a. (ii) b. (i) c. (iii)
2. a. (i) b. (iii) c. (i) d. (iv) (i)

DO AND LEARN

1. Pick up any 10 products that your family and you use. For example, books, laptop etc. List them and identify mark of intellectual property rights in them.

| S.No. | Product | Trademark | Copyright | Patent |
|-------|---------|-----------|-----------|--------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

2. Pick up five services and five products that your family and you use. List them and identify the creativity in them.

CONCEPT MAP

