



ENTREPRENEURSHIP: THEORY & PRACTICE (HS308)

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Module-2

Innovation and Entrepreneurship:

Creativity, innovation viz., technological innovation and scientific knowledge,
success factors for entrepreneurship



CREATIVITY

The idea for FedEx

The World's largest express transportation company germinated in a term paper submitted by a Yale University Graduate – **Frederick W. Smith**. He discussed that the existing distribution system was inadequate and later in 1971 when bought a firm Arkansas Aviation Sales he found that there was tremendous difficulty getting packaged delivery within one or two days even of time sensitive shipments like medicines, computers, electronics. Hence to overcome the problems of ineffective distribution system he re-conceptualized the idea of his term paper.

When people hear the word creativity, they often think of artists or musicians. But creativity isn't just about making art, music or fashion it's also about **finding new ideas and ways of doing things**. And creativity is essential for entrepreneurship.



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- Creativity is a **continuous process** in which required party to work hard and continually improve ideas and solution.
- Creative person will work hard by making gradual alteration and refinements to their work.
- Creativity in entrepreneurship also implies the organization environment such as team climate, teamwork and others.
- Creativity can be defined the process of **developing an original product, service or idea** that makes a socially recognized contribution.
- Moreover **novel combination of old ideas** can also be considered as creativity.
- Hence creativity is the **ability to bring something new into existence from either an existing or new idea**.
- A creative person conceives an idea, which is **new**. It is **immaterial whether he takes any action**.
- Hence the **emphasis is on the ability and not the activity of bringing anything new**.



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- Entrepreneurs need new ideas for setting up / running new business ventures.
- An entrepreneur who is creative and brings her / his ideas into reality turns out to be successful in business.
- Creativity has also become important in the present **highly competitive market** where the business needs to **differentiate itself from others to survive**.
- The meaning of creativity is, the **capability to create, articulate or apply inventive ideas, techniques and perspectives** often in a collective environment.
- Entrepreneurship is a creative action focused on excellent communication of production aspects through a suitable investment and motivated behaviour and with rational risk-taking.
- Creativity shows imagination and novelty of thought in moving beyond ordinary thinking.
- It can be considered by extending or even breaking the rules of convention.
- Even the **slightest departure from the norm is defined as creativity**.



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- There is a **misconception** that **people only need intelligence** to achieve everything they need in life.
- However, it takes time for aspiring entrepreneurs to understand that **creativity plays an integral role** as well.
- Unfortunately, most of them stress more intelligence than creative thinking.
- It could perhaps be because intellectual knowledge is assessable whereas creativity can be challenging to spot.
- An entrepreneur uses full employee potential by inspiring creativity in the workplace. There might be a bulk of ideas which are undeveloped and ready to be utilized. By identifying such creativities, an entrepreneur can earn results in the form of profitability, financial strength, and effective decision-making, **INTRAPRENEUR**



Are Creative Persons Born or Made?

- The **right brain hemisphere** helps an individual **understand analogies, imagine things and synthesise information**.
- The **left brain hemisphere** helps the person **analyse, verbalise and use rational approaches to problem solving**.
- Although the two brain hemispheres (right and left) process information differently and are responsible for different brain activities and skills, they are **integrated through a group of connecting nerve fibres** called the **corpus callosum**.
- Because of this connection and the nature of the relationship between the activities of each hemisphere, each hemisphere should be viewed as existing and functioning in a **complementary relationship with the other hemisphere**.
- The **creative process involves logical and analytical thinking in the knowledge accumulation, evaluation and implementation stages**. In addition, it calls for imagination, intuition, analogy conceptualisation and synthesising in the incubation and idea-creation stages. So to become **more creative it is necessary to practise and develop both right- and left-hemisphere skills**.



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- Some of the psychologists were of the view creativity as a function of the brain's right hemisphere and creative persons are born and not made.
- But various scientific researches have proven that human brain can be conditioned under stimulating environment to become creative.
- It is for these reasons that organizations & consultancies organize training sessions on creativity.



Types of Creativity

- **Functional creativity**- need to **solve problems** and **find new ways of doing things** (develop new ideas).
- It's often described as "left brain" activity and **requires logical thinking** and an **analytical approach**.
- **Expressive creativity**- **create art, music, or poetry**.
- It's often described as a "right brain" activity and requires an open and **imaginative mind**.
- Expressive creativity can be used to **convey feelings, ideas, or stories** (communicate your vision and connect with your customers).
- **Social creativity**- **build relationships** and **create social bonds**.
- It involves the ability to **empathize** with others and see the world from their perspective.
- Social creativity often manifests itself in the form of **conversation, collaboration, or negotiation** (build strong relationships and create a supportive network).

**** All three types of creativity are important in entrepreneurship ****.



Process of Creativity

Brilliant ideas do not come out of the blue they **evolve through a creative process** wherein ideas are germinated developed and matured by imaginative person. The process of creativity involves six stages:

Stage I: Task Presentation

The first stage to the process of creativity is **idea germination**. The idea germinates from **personal interest or an existing problem or future opportunity**. The important thing at this stage is **how far is the idea motivating enough to capture the attention of the entrepreneur**. But a lot of **internal motivation is required** to learn about a problem/ or to tap an opportunity and if the perceived problem is motivating enough to capture the individual's attention, one moves to the Stage II.

Stage II: Preparation

Preparation is the plan for a conscious research of a solution to the problem/ opportunity, it involves seeking information about the problem and how others have tried to solve it. This stage builds up and activates information that is relevant to the problem. At this stage a **market research** is often conducted for new products and services. This stage **does not** generally **deliver any results**. However, the effort of **gathering information and knowledge** is useful for the final solution. Successful gathering of information at this stage motivates entrepreneur to move to Stage III.



Stage III: Incubation

In this stage the **knowledge and information is assimilated**. It is a stage of subconscious assimilation of knowledge. Herein the subconscious intellect assumes the control of the creative process and the limitations of human logic do not affect the solutions.

Incubation- process of taking an idea from concept to an actual product, service or business and testing about the concept to see, if the product can fit the market.

Stage IV: Idea Generation

Multiple ideas and solutions (alternative courses of actions) are **generated** at this stage. These ideas are **brainstormed** to assess the feasibility, by using previous experiences, insight and fears. Thus this is the **stage of evolution of alternative ideas or solutions**.

Brainstorm

This is the old-school way to drum up creative ideas and solve problems, but it is still by far the best. The corporate world was woken up when **Alex Osborn** introduced this concept in the 1950s.



- shout out or write down every solution that comes to mind
- off-the-wall ideas are welcome
- criticise nothing
- organise later
- build on every idea – even when it seems foolish or fanciful.

Stage V Idea Validation

Ideas generated in the previous stage needs to be **verified and proved realistic, useful and practical**. Various approaches to the problem are attempted using previous experiences, insight and fears. Ideas are recognized as being feasible. This is the stage that **refines knowledge into application**. The **idea may be rejected, accepted, modified with minor or major changes**. If the idea is rejected, the whole processes need to start again.

**** Alpha testing****

Alpha testing- are typically performed by internal employees in a **lab or stage environment**.

Stage VI Outcome Assessment

An assessment of the creative process can either lead to the achievement of goal wherein a creative idea or solution to the problem is located or no progress in this direction is achieved. In any case the creative process ends. If the result is between the two extremes then the process returns to stage I.

****Beta testing/ Prototype ****

Prototype- a **functional, not final version** (early-mock up) of a product or service that businesses can use for testing, to solicit feedback, and to introduce to investors before officially launching to a wider market.

A simple drawing or rough model that helps innovators determine what they need to improve and fix in their design. Egs.- wireframes, slides, landing pages, working models, an interactive frontend, and videos.

Beta testing- (pre-release testing) an opportunity for **real users** to use a product in a production environment to uncover any bugs or issues before a general release. Beta testing is the **final round of testing before releasing a product to a wide audience**.



ARENAS OF CREATIVITY

Creativity researcher **William Miller** argues that **people often do not recognise when they are being creative**, and they frequently overlook opportunities to be creative.

He suggests that the path to creativity begins by **first recognising all of the ways in which we are or can be creative**.

People in organisations can channel their creativity into seven different arenas:

- **Idea creativity:** **thinking up a new idea or concept**, such as an idea for a new product or service or a way to solve a problem.
- **Material creativity:** **inventing and building a tangible object** such as a product, an advertisement, a report or a photograph.
- **Organisation creativity:** **organising people or projects** and coming up with a new organisational form or approach to structuring things. Egs. organising a project, starting a new type of venture, putting together or reorganising a work group, and changing the policies and rules of a group.



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- **Relationship creativity:** an **innovative approach to achieving collaboration**, cooperation and win-win relationships with others. The person who handles a difficult situation well or deals with a particular person in an especially effective manner is being creative in a relationship or one-on-one context.
- **Event creativity:** **producing an event** such as an awards ceremony, team outing or annual meeting. The creativity here also encompasses ways in which people are involved, sequence of happenings, setting and so forth.
- **Inner creativity:** **changing one's inner self**; being open to new approaches to how one does things and thinking about oneself in different ways; achieving a change of heart or finding a new perspective or way to look at things that is a significant departure from how one has traditionally looked at them.
- **Spontaneous creativity:** **acting in a spontaneous or spur-of-the-moment manner**, such as coming up with a witty response in a meeting, an off-the-cuff speech, a quick and simple way to settle a dispute, or an innovative appeal when trying to close a sale.



CREATING THE RIGHT SETTING FOR CREATIVITY

Creativity is most likely to occur when the **business context is right**.

No enterprise will have creative owners and managers for long if the right context within the firm is not established and nurtured.

Some important characteristics of what factors are important:

- A trustful management that does not over-control employees
- Rewarding creative ideas and process
- Encouraging employees to experiment
- Open channels of communication among all business members
- Considerable contact and communication with outsiders
- A large variety of personality types
- A willingness to accept change



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- Little fear of negative consequences for making a mistake.
- The selection and promotion of employees on the basis of merit.
- Giving autonomy and freedom for decision making to the employees.
- The use of techniques that encourage ideas, including suggestion systems and brainstorming.
- Conceptual blending
- Sufficient financial, managerial, human, and time resources for accomplishing goals.



Innovation & Entrepreneurship

Innovation- Generation of new ideas, whether it be new products, processes, upgrades to existing services, or business models.

It is the **act of introducing something new or creating change** that adds value to existing products or services.

It disrupts the status quo and encourages a departure from the traditional approach.

Innovation requires **fresh thinking, creativity**, and the **ability to identify opportunities for change and improvement**.

Innovation is the embodiment of **creative thinking, driving the development of unique solutions and ideas**.

It encompasses the **introduction of technological or digital advancements** that **unlock new possibilities and capabilities**.

Serving as the **backbone of every organization**, innovation is imperative for success.

Businesses that neglect to cultivate an innovative culture put themselves at risk of being outpaced by their more forward-thinking competitors.



Types of Innovation

- **Invention** – the **creation of a new product, service or process**, often one that is novel or untried; such concepts tend to be revolutionary. Egs.: Air plane, light bulb, etc.
- **Extension** – the expansion of a product, service or process already in existence; such concepts **make a different application of a current idea**. Egs.: Facebook (Meta), etc.
- **Duplication** – the **replication of an already existing** product, service or process; the duplication effort, however, is **not simply copying but adding the entrepreneur's own creative touch** to enhance or improve the concept to beat the competition. Egs.: Walmart, Pizza Hut, etc.
- **Synthesis** – the **combination of existing concepts and factors into a new formulation**; this involves taking ideas or items already invented and finding a way so together they form a new application. Egs.: Fred Smith—Fed Ex, Howard Schultz—Starbucks, etc.

Innovation is different from Invention.

Invention is the outflow of an applied research, while **Innovation is the successful introduction of an invention** in the market as a functional solution (product or service)

Invention is discovery of new methods and new materials whereas **Innovation is utilization of inventions to produce new and better quality of products** that give greater satisfaction to the consumer and higher profits to the entrepreneur.

An **inventor gives idea** and an **innovator implements the idea for economic gain**.

Some individuals can be **both** inventor & innovator.

The innovator (entrepreneur) commercially exploits the invention produced by him or by any other person.

Similarly entrepreneur also exploits even creative ideas for commercial gains.



One of the most successful, **innovative inventors** was **Thomas Alva Edison**, who managed to be granted exclusive rights over more than 1,000 patents throughout his life. Three of them were the light bulb, the cinema tape-film of 35 mm and the electric chair. His **capacity to innovate, and not simply invent, i.e. his capacity not only to have ideas but convert them into products being sold successively in the market**, helped to create a large enterprise (General Electric), with its worth standing at circa 21.6 bn \$ in 1920. In other words, Edison understood correctly the **two-way character of innovation** requiring mobilization and coordination of two forces, the **technology promise and the market demand**.



Major Misconceptions of Innovation

Entire concept of innovation conjures up many thoughts and misconceptions; it seems that everyone has an opinion as to what innovation entails.

- **Innovation is planned and predictable.** This statement is based on the old concept that innovation should be left to the research and development (R&D) department under a planned format. In truth, **innovation is unpredictable** and may be **introduced by anyone**.
- **Technical specifications** must be thoroughly prepared. This statement comes from the engineering arena, which drafts complete plans before moving on. **Thorough preparation is good, but it sometimes takes too long.** Quite often, it is more important to use a **try/test/revise approach**.
- **Innovation relies on dreams and blue-sky ideas.** Creative process is extremely important to recognising innovative ideas. However, accomplished innovators are very practical people and **create from opportunities grounded in reality not daydream**.



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- **Big projects will develop better innovations than smaller ones.** This statement has been **proven false** time and again. **Larger companies are now encouraging their people to work in smaller groups** where it often is easier to generate creative ideas.
- **Technology is the driving force of innovation success.** Technology is certainly one source for innovation, but it is **not the only one**. Numerous sources exist for innovative ideas; technology is certainly a driving factor in many innovations, but it is not the only success factor. Moreover, the **customer or market is the driving force behind any innovation**. **Market-driven or customer-based innovations have the highest probability of success.**



Characteristics of Innovation

Characteristics of innovation are classified in three categories:

- **Product:** Product innovation is in place when a new or improved product is launched in the market.
- **Process:** Process innovation is the introduction of new processes in product development or the improvement thereof.
- **Management (organization):** The introduction of changes in administration and organization constitutes the administrative innovation.

Note: **Also refer to the PDF shared through the Google classroom**



Innovation & Creativity

There is a great misunderstanding of considering innovation and creativity as synonymous to invention.

Creativity refers to the ability to come up with original ideas, while **innovation involves implementing those ideas to create value**.

Creativity	Innovation
Creativity is the process of creating new products.	Innovation is the process of implementing ideas and technologies so that the goods and services are renewed.
Creativity can be tangible or intangible	Innovation is majorly intangible
Creativity is an imaginative process	Innovation is a productive process
The risk factor is negligible in creativity	The risk factor is quite apparent in innovation



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Creativity	Innovation
Creativity is related to brainstorming and thinking about new ideas	Innovation is related to introducing new ideas and technologies to carry out production smoothly and efficiently
There is no money consumption in creativity	There is money consumption in innovation
Creativity is about formation	Innovation is all about bringing change
Creativity precedes innovation	Creativity is succeeded by innovation
Creativity may or may not involve an organization	Innovation involves an organization for the production of services and goods
Creativity does not depend on materialistic things	Innovation depends upon the monetary factor, i.e., how to implement the ideas into profit-earning
The novel ideas are communicated through creativity	Inventions are communicated through innovation



Importance of Innovation in Entrepreneurship

- **Increases productivity-** The increase in productivity of individuals, processes, and business models, among others. Simply put, innovation presents new ideas to business leaders to **increase efficiency with minimum resources**.
- **Persistent Improvement-** Innovation gives **organizational durability** when you are **making continual improvements**. A good entrepreneur will realize the importance of innovation, which will help in increasing the creativity of business.
- **Brings uniqueness and novelty to business process-** Business processes have been the same for more than a few decades. However, with the introduction of innovation in business, there has been a disruption that is believed to be caused due to novelty, creativity, and uniqueness. That is also helping in **making the business stand out from the rest and vicariously contributing to increased revenue and market share**.



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- **Reduces cost and increases revenue-** As mentioned above, one of the biggest advantages of innovation is that it helps **increase revenue and market shares**. Subsequently, **leading to a reduction in cost**.
- **Gives a competitive advantage (competition)-** Thinking innovatively or creatively can help managers and executives develop unique marketing campaigns to help them stand out. Also, formulate promotional and advertising strategies that will help in increasing market share and revenue, giving the company a competitive advantage.
- **Longevity-** The importance of innovation in entrepreneurship is another key value for the longevity of a business.



Success Factors for Entrepreneurs!!

- **Creativity-** The field of entrepreneurship is crowded with competitors and rivals. Entrepreneurs must comprehend the existing competitive landscape. The greater the number of competitors, the more complex the journey becomes. In light of this reality, **business owners must display elevated creativity in product creation.** Offerings need to stand apart from those of other companies while effectively addressing societal challenges.
- **Persistence-** Is simply a refusal to give up on something. **Entrepreneurs must refrain from giving up in the face of losses and risks.** They need to navigate phases of dwindling income, challenging capital recovery, customer dissatisfaction, and unsold products. With a resolute mindset deeply ingrained, businesspeople can weather challenges with composure. **Persistence prevents business owners from hastily surrendering.**



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- **Patience-** Challenges will consistently arise while operating a business but entrepreneurs must cultivate patience when encountering problems or obstacles. A composed mindset contributes to the seamless operation of a business by preventing hasty decision-making. Furthermore, it's crucial to remember that patience proves invaluable when business owners are directly engaged in the field. Confronting consumers, clients, colleagues, employees, income fluctuations, and the challenges of sourcing raw materials or innovations necessitates a substantial reserve of patience.
- **Networking/Connections-** The world of business cannot be navigated alone. Business owners must adeptly forge connections across diverse domains. Establishing connections is one of the most crucial factors for entrepreneurial success. Expand your network to encompass fellow entrepreneurs, clients, and even consumers. A broader array of connections proves immensely advantageous for the business's progression. Strong relationships also facilitate the company's growth. **More connection means more possibilities for building a successful business.**



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- **Entrepreneurial Knowledge-** Another pivotal factor bolstering entrepreneurial success is **possessing comprehensive knowledge about entrepreneurship**. An entrepreneur must grasp the intricacies of entrepreneurial knowledge. A **thorough understanding of all ongoing business operations is imperative**. Beyond calculating cash flow, capital distribution, and marketing strategies, business owners should also immerse themselves in the **study of their specific industry**. A **wealth of knowledge can birth fresh, innovative ideas**.
- **Risk-taking; Calculated Risk-** Courage becomes exceedingly crucial within the realm of business. **Entrepreneurs must exhibit a willingness to take risks, but calculated risks**. They should be prepared to confront the most adverse scenarios, ensuring they don't succumb easily. Grasping risks and effectively managing them can expedite rapid business growth.



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- **Action-Taking**-Numerous individuals aspire to be entrepreneurs, yet not all muster the audacity to take the leap. **Embarking on an entrepreneurial journey necessitates the courage to translate intentions into actions.** Business owners mustn't solely contemplate ideas but also be ready to execute them adeptly while understanding associated risks.
- **Entrepreneurial Skills**-Both knowledge and courage, in isolation, fall short of ensuring triumph in the business sphere. **Entrepreneurs must have the ability to quickly and methodically apply knowledge. This proficiency embodies an entrepreneurial skill.** Continuously refining this aptitude prevents the business journey from halting prematurely. **Employing the right skills further harbors the potential for business longevity.**
- **Entrepreneurial Intelligence**- Entrepreneurs must possess entrepreneurial intelligence, allowing them to discern the appropriate solution for each emerging problem. **Intelligence will also bring uniqueness to the company because competitors can't copy it easily.**



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- **Teamwork-** The success of a business doesn't solely hinge on the prowess of its owner. Numerous stakeholders play a role, including employees and other business partners. Avoid fixating solely on oneself; foster strong teamwork. Regardless of a business's scale, reaching objectives becomes an uphill task without cohesive human resources. Teamwork not only facilitates goal attainment but also cultivates a serene work environment, ushering in positive energy.
- **Experience-** Experience is another crucial factor in achieving entrepreneurial success. As the saying goes, **experience is the ultimate teacher**. It **empowers business owners to make informed decisions in the future and equips them to tackle any challenges that emerge**.
- **Leadership-** Business owners must possess strong leadership abilities, as leadership is a pivotal factor in entrepreneurial success. **Entrepreneurs with exceptional leadership skills can effectively oversee all facets of entrepreneurship**. Proficient leadership also **facilitates seamless communication between business owners and their employees**. Cultivating this attribute ensures that the business can be steered in the intended direction.