2-Entrepreneurship - Creativity and Innovation

Developing Creativity & Understanding Innovation

OBJECTIVES

- Define Opportunity.
- Explain the process of creativity.
- Describe how innovation is important as a dimension of entrepreneurship.
- Identify major changes that create opportunities for entrepreneurs.
- Discuss popular myths of entrepreneurship and why they are more fantasy than fact.
- Describe the main factors that lead to success for new ventures.

“Entrepreneurs have a knack for looking at the usual and seeing the unusual, at the ordinary and seeing the extraordinary. Consequently, they can spot opportunities that turn the common place into the unique and unexpected”

D. G. Mitton, Author

What is an Opportunity?

Most definitions of opportunity include references to three central characteristics:

- Potential economic value (the capacity to generate profit);
- Novelty or newness;
- Perceived desirability.

- *Opportunity is the apparent way of generating value through unique, novel, or desirable products, services, and even processes that have not been previously exploited.*

Opportunity (Contnd)

Opportunity spring from ideas but not all ideas are opportunities.

While we all have the capability to generate a huge range of ideas, not every one of us knows how to turn an idea into a valuable, revenue generating opportunity.

Making an idea a reality is a process that involves:

- Time;
- Resources;
- Commitment; and
- A great deal of work.

INTRODUCTION

- A crucial dimension of wealth creation and every new venture is ***innovation.***

- That is how new ideas are transformed into a commercial reality and add value to society.

- Peter Drucker gives us the following framework for study:

"Admittedly, all new small businesses have many factors in common. But to be entrepreneurial, an enterprise has to have special characteristics over and above being new and small.

Entrepreneurs create something new, something different; they change or transmute values."

CREATIVITY AS A PREREQUISITE TO INNOVATION

- The terms *creativity* and *innovation* are often used to mean the same thing, but each has a unique connotation.
- **Creativity** is "the ability to bring something new into existence. " This definition emphasises the "ability," not the "activity," of bringing something new into existence. A person may, therefore, conceive of something new and envision how it will be useful, but not necessarily take action to make it a reality.
- **Innovation** is the process of doing new things. This distinction is important.
- Ideas have little value until they are converted into new products, services, or processes. Innovation, therefore, is the transformation of creative ideas into useful applications, but creativity is a prerequisite to innovation

The Creative Process

- Entrepreneurs need ideas to pursue, and ideas seldom materialise accidentally. Isaac Newton may have been hit on the head by a falling apple, but he discovered gravity through a lifetime of scientific investigation. Ideas usually evolve through a *creative process* whereby imaginative people germinate ideas, nurture them, and develop them successfully.

- Various labels have been applied to stages in the creative process, but most social scientists agree **on five stages** that are labelled as *idea germination, preparation, incubation, illumination,* and *verification*. In each stage, a creative individual behaves differently to move an idea from the seed stage of germination to verification, and, behaviour varies greatly among individuals and their ideas.

Idea Germination

- The germination stage is a *seeding process*. It is not like planting seed as a farmer does to grow corn, but more like the natural seeding that occurs when pollinated flower seeds, scattered by the wind, find fertile ground to take root.
- Exactly how an idea is germinated is a mystery; it is not something that can be examined under a microscope. However, most creative ideas can be traced to an individual's *interest in* or *curiosity about* a specific problem or area of study.

Formal Idea Generation Strategies

- Analytical strategies: involve taking time to think carefully about a problem by breaking it into parts or looking at it in a more general way in order to generate ideas about how certain products or services can be improved or made more innovative.

Assignment 2

- Identify and discuss Five (5) formal idea generation strategies
- Submission Deadline: 21st March, 2021

Preparation

- Once a seed of curiosity has taken form as a focused idea, creative people embark on a conscious search for answers.

- If it is a problem they are trying to solve, then they begin an intellectual journey, seeking information about the problem and how others have tried to resolve it.

Preparation.

- If it is an idea for a new product or service, the business equivalent is market research.
- Inventors will set up laboratory experiments,
- Designers will begin engineering new product ideas, and
- Marketers will study consumer-buying habits.

- Any individual with an idea will consequently think about it, concentrating his or her energies on rational extensions of the idea and how it might become a reality.
- In rare instances, the preparation stage will produce results. More often, conscious deliberation will only overload the mind, but the effort is important in order to gather information and knowledge vital to an eventual solution.

Incubation

- Individuals sometimes concentrate intensely on an idea, but, more often, they simply allow ideas time to grow without intentional effort.

- The idea, once seeded and given substance through preparation, is put on a back burner; the subconscious mind is allowed time to assimilate information.

Illumination

- The fourth stage, illumination, occurs when the idea resurfaces as a realistic creation. There will be a moment in time when the individual can say, "0h, I see!"

- Illumination may be triggered by an opportune incident. The point, of course, is that he was prepared and the idea was incubated.

Illumination

- The important point is that most creative people go through many cycles of preparation and incubation, searching for that incident as a catalyst to give their idea full meaning.
- When a cycle of creative behaviour does not result in a catalytic event, the cycle is repeated until the idea blossoms or dies.
- This stage is critical for entrepreneurs because ideas, by themselves, have little meaning.
- Reaching the illumination stage separates daydreamers and tinkerers from creative people who find a way to transform value.

Verification

- An idea once illuminated in the mind of an individual still has little meaning until verified as realistic and useful.

- Entrepreneurial effort is essential to translate an illuminated idea into a verified, realistic, and useful application.

- Verification is the development stage of refining knowledge into application. This is often tedious and requires perseverance by an individual committed to finding a way to "harvest" the practical results of his or her creation.

Verification

- During this stage, many ideas fall by the wayside as they prove to be impossible or to have little value.
- More often, a good idea has already been developed, or the aspiring entrepreneur finds that competitors already exist.
- Inventors quite often come to this harsh conclusion when they seek to patent their products only to discover similar inventions registered.

REVIEW

- 1. Define creativity and distinguish it from innovation.

- 2. Identify the five stages of creativity and explain why each is important to the creativity process.

INNOVATION AND ENTREPRENEURSHIP

- If creativity is the seed that inspires entrepreneurship, innovation is the process of entrepreneurship. This was Schumpeter's conclusion when he wrote about the economic foundations of free enterprise and entrepreneurship.

- Drucker agrees and elaborates: "Innovation … is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth."

- Earlier, we defined innovation as the process of doing new things. It is important to recognise that innovation implies action, not just conceiving new ideas. When people have passed through the illumination and verification stages of creativity, they may have become inventors, but they are not yet innovators.

INVENTIONS

- Inventors are not limited to those who create new products. They include those who identify new technological processes, new forms of plant life, and new designs.

- Each of these, incidentally, can lead to new patents, as we shall.

- Inventors usually are stereotyped as people who deal with "things," such as new products, but most inventions have dealt with new processes or new technical knowledge.

INNOVATION

- For an idea to have value, it must be proven useful or be marketable, and to achieve either status, the idea must be developed.
- Innovation is the development process.
- It is the translation of an idea into an application.
  - It requires persistence in analytically working out the details of product design or service,
  - to develop marketing,
  - obtain finances,
  - and plan operations.
  - If the entrepreneur is going to manufacture a product, the process includes obtaining materials and technical manufacturing capabilities, staffing operations, and establishing an organisation.

Technological Innovation

- A number of industrial studies reveal that for a technological innovation to succeed, there are three important people involved and seven important conditions to satisfy.
- The combination of these people and conditions satisfy the need for creativity and implementation.
- The three key people are the creative source, the champion, and the sponsor.

Key People in Technological Innovation

- ***Creative source:*** The inventor or originator of the idea that led to the knowledge or vision of something new; the artist of creative endeavour.
- ***Champion:*** The entrepreneur or manager who pursues the idea, planning its application, acquiring resources, and establishing its markets through persistence, planning, organising, and leadership.

- ***Sponsor***: The person or organisation that makes possible the champion's activities and the inventor's dreams through support, including finances, contacts, and advice.

The creative source & Co

- The creative source is an individual; organisations do not create ideas or incubate fantasies.
- The champion is also an individual-perhaps the creative source, or an entrepreneur who joins with the inventor, or a corporate manager who has the insight to help pursue a creative idea.
- The sponsor may be an investor (such as a venture capitalist), or an organisation, such as 3M, where corporate resources are allocated to innovative projects and their champions.

Seven Conditions

- The seven conditions required for success in technological innovation are related partially to the success of the three key people involved and partially to the environment in which innovation takes place.

- Although these conditions were derived from corporate studies in research and development, they apply equally to new entrepreneurial ventures, and they include the following:

Seven Conditions

- 1. An outstanding person in an executive leadership position to support strategic decisions that encourage creativity and innovation development.
- 2. An operational leader to carry out the essential tasks of converting knowledge into a commercial application.
- 3. A clear need for the application by sufficient potential consumers to warrant the commitment of resources to the innovation.
- 4. The realisations of the product, process, or service as a useful innovation providing value to society.

Seven Conditions

- 5. Good co-operation among the crucial players and among diversified functions in an organisation, all of which, together, must bring the idea to fruition.
- 6. Availability of resources and the supporting technology to succeed in the endeavour.
- 7. Co-operation and support from external sources who can influence the success of an innovation, including government agencies, investors, vendors, suppliers, and creditors.

REVIEW

- Explain “innovation" and distinguish it from invention.

- Identify and describe the three key roles and seven conditions important for technological innovation.

Identifying Opportunities

Two primary pathways to identifying opportunities exists:

- The Finding Approach:
  - ❖Assumes that opportunities exist independent of entrepreneurs
  - ❖The opportunities exist as a result of the changing landscape in technology, consumer tastes and preferences, government regulation and demography.
- Building Approach:
  - Assumes that opportunities do not exist independent of entrepreneurs but are instead a product of the mind.
  - Opportunities originate form the entrepreneurs prior knowledge and experience, which equip the entrepreneur to create them.
  - To identify them, use what you know, whom you know, and who you are.

OPPORTUNITIES THROUGH CHANGE

- Entrepreneurs tend to be "strategic thinkers" who recognise changes and see opportunities where others do not.
- By creating new ventures based on these strategic changes, entrepreneurs make a contribution and are rewarded in terms of wealth and personal satisfaction.
- Entrepreneurship is, therefore, the result of inspired strategy to exploit change, but first "change" has to be recognised.
- In the next few slides, major sources of change are examined together with examples of how entrepreneurs turned these changes into opportunities.

Scientific Knowledge

- Scientific knowledge has been at the heart of many new enterprises, and we can see how important it is by tracing the development of computers.

- Charles Babbage created a mechanical calculating machine more than a century ago; it was the forerunner of mechanised adding machines. Babbage is mentioned historically as contributing to the concept of a computer because he helped revolutionise numerical manipulation.

- Herman Hollerith used the binary system to create the first punch card in 1890, but this was to be significant only a half century later.

Process Innovations

- Closely associated with new scientific knowledge is the implementation processes, techniques, and methods essential to make knowledge useful.

- Edison's light bulb was only a curiosity until he developed an electric system for supplying power to consumers.

- Early computers had little value, until operating systems and data storage techniques were developed. In fact, computers had only limited value until symbolic languages were created to encode, manipulate, and store data. Because it developed and controlled the *processes* needed to make computers useful, IBM came to dominate a hardware computer industry.

- During the late 1950s, when virtually every major company making electrical apparatus and communication equipment was also making computer hardware, IBM was relatively unknown, but IBM technicians created symbolic languages in FORTRAN and COBOL, subsequently setting the industry standards.

Process Innovations

- This pattern of entrepreneurial activity has been repeated often. Steven Jobs and Stephen Wozniak were largely successful establishing Apple Computer because of their proprietary *software processes.*
- William Gates III founded Microsoft Corporation and set industry standards in MS-DOS operating systems to coincide with the introduction of the IBM PC in 1981. Gates had been out of high school only five years when he and a companion launched their trend-setting venture.
- There are literally thousands of examples of entrepreneurs who have recognised opportunities and transformed knowledge into commercial value.

Industrial Changes

- There is little doubt that eventually power sources will be based on solar devices.
- Safe nuclear systems are also on the horizon.
- Meanwhile, energy is based on fossil fuels with some alternatives such as hydroelectric and geothermal power.
- But *someone someday will* instigate the transition,
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Industrial Changes

- Industrial change can occur through natural events, such as the discovery of oil, or as a result of human events.
- For example, the deregulation of the airline industry forced dozens of major airlines to compete with regional "upstarts" and commuter airlines. Competitors introduced innovations in flights, new fares, travel plans, and new services.
- People Express, Presidential Airlines, New York Air, USAir, and many others jolted the industry during the 1980s with low-priced fares, no-frills service, and innovations in ticketing, baggage handling, and convenient routing.
- Some of these have not survived, but others such as Texas International have grown rapidly to be among industry leaders.

Market Changes

- Historically, we look at the success of Henry Ford when he developed an inexpensive automobile. Until his Model T, most automobiles were luxuries. He recognised the demand and decided that a car built on simple principles would revolutionise the automobile industry.
- Domino's Pizza was built on the single, important observation that a lot of people ordered pizza to take out.
- John H. Johnson, the founder of *Ebony* magazine, recognised a neglected segment of American readership, the black American. During World War II, Johnson launched *Negro Digest*, and today he heads a publishing empire with subsidiaries in cosmetics, fashions, perfumes, and entertainment that is the largest black-owned corporation in the United States.

Market Changes

- An extraordinary change is taking place now, **as government services are being privatised.** The government has long been a major market, particularly for federal programs such as defence, and on state and local levels, government agencies dole out hundreds of millions of dollars to private contractors for everything from cleaning services to construction projects.

- An important trend emerged during the late 1980s as government agencies began to rapidly endorse privatisation. This is the process of turning over to private contractors activities once controlled through government agencies.

- Government has become a more active consumer and a less active employer. Governmental agencies in Washington are contracting lawn services rather than employing maintenance personnel to do these jobs. Trash collection, rapid transit systems, government document printing, road repair services, security systems, training services, and public utilities are "going private" at an accelerated pace.

Demographic Changes

- Demographic data are concerned with population trends, age, sex, and ethnic characteristics, educational status, and income of a nation's population.
- As a nation's demographics change, new opportunities to serve human needs arise.
- By tracking these changes, entrepreneurs can identify opportunities and react to them. Population statistics are well documented by a country's Census Bureau, by regional and local authorities, and by an enormous number of sociological studies.
- The composition of human resources is closely tracked to document career behaviour, family structures, emigration and, life expectancies, birth rates, and on and on.

Social and Cultural Changes

- The industrial revolution stimulated changes in how people lived, worked, spent their money, recreated, and worshiped.
- Men began working for wages rather than as farmers or in government service.
- Sailors became merchantmen.
- Craftsmen moved out of their shops and into factories.
- Adventurers put aside swords for plows and settled new worlds.
- These social changes brought new demands that inspired a faster rate of change in innovation

WINDOWS AND CORRIDORS

- A window is a time horizon during which opportunities exist before something else happens to eliminate them. A unique opportunity, once shown to produce wealth, will attract competitors, and if the business is easy to enter, the industry will become rapidly saturated.
  - Bicycles did not become viable commercial products until people needed them as transportation. When that need occurred, hundreds of bicycle manufacturers rushed to take advantage of the "window of opportunity."
- Literally every successful product and service has had an optimal period of time for commercialisation. Those introduced too early have usually failed, and those introduced too late suffered from crowded markets

CORRIDOR PRINCIPLE

- Another aspect of many successful ventures is called the *corridor principle*.

- The corridor principle suggests that opportunities evolve from entrepreneurs being positioned in similar work or having had experience with related ventures so that when a window opens it is easy for them to move quickly into a new venture.

REVIEW

- 1. Discuss why a window of opportunity is critical for success.

- 2. Explain how a corridor influences the evolution of an innovation.

MYTHS - FANTASIES NOT FACTS

- Folk heroes like Steven Jobs and Mitchell Kapor are beset by myths that they "stumbled into success" and got their ideas by accident.
- Several references have been made earlier to each of these popular individuals, but what may not be clear is that they spent several years striving for a foothold in their particular fields.
- Both men *made* success by creating their own brand of luck. There are other myths to be explored, but let's begin by expanding the notion of "luck."

Luck Is for Gamblers

- Clearly, there are individuals who seem to have an uncanny ability to be able to spot and to exploit opportunities, and luck (both good and bad) plays a role in the outcome of many ventures.
- More often, successful individuals have been nourishing a concept for some time or working on closely related projects when a breakthrough occurs.

Make or Break on the First Venture

- Another popular myth is that entrepreneurs strike it rich with the first great "flash of genius," or, conversely, they fail miserably with the first venture.
- Entrepreneurship is not a "boom or bust" process, even though many new firms succeed brilliantly and others do not survive for long. The point is that too much distortion exists on both issues.
- Bankruptcy statistics suggest that of those who have gone bankrupt, 80 percent were in business for less than five years. That figure sounds terrible, but the qualifying point is that statistics are compiled on those firms who do go bankrupt. How many continue in business?

Entrepreneurs Are Mavericks and Misfits

- Evidence suggests that many entrepreneurs march to the proverbial different drummer. They are not always among the best students, and they tend to be restless in structured jobs. Consequently, they are likely to be unsettled wanderers.
- It is true that entrepreneurs prefer independence and can be rather rebellious, and both conditions can affect their performance in school and at work.
- Most successful entrepreneurs, however, are from the ranks of above average students, and they are relatively unlikely to have drug or alcohol problems or to run afoul of the law. Entrepreneurs are *mavericks* in the sense that they instigate change and challenge the status quo, but they are not "misfits."

Are Entrepreneurs Born or Made?

- A persistent notion is that most entrepreneurs are "born" with innate characteristics that prepare them for the often topsy-turvy life of new venture creation.
- Clearly, entrepreneurs have personal characteristics that lead to a more venturesome destiny. Successful entrepreneurs tend to be optimistic, have a keen sense of determination, are energetic, and often have an entrepreneurial parent.
- However, there is substantial evidence that entrepreneurial characteristics may be environmentally based. Firstborn children, for example, are often expected to take over parental businesses as heirs to established enterprises. One's childhood background often forges an entrepreneurial spirit, as individuals from less-fortunate economic conditions have to find routes to success other than through traditional jobs.
- Those who believe entrepreneurs are born conclude that entrepreneurship cannot be taught. This corollary myth would suggest that studying how new ventures are formed or how innovation takes place is of little value. If the environmental theme has credence, then learning as much as possible about the entrepreneurial process will better prepare students to succeed in business

Assignment 3

Submit an idea you will further develop into a business plan in he renewable energy sector. The submission should not be longer than a quarter of a page .

Deadline: 2nd March, 2021