# Chapter Readings, Lecture Notes Outline & Videos

Chapter Readings, Lecture Notes, Online Videos and Podcasts for Chapter 3.

1.  Read Ch 3- Inside the Entrepreneurial Mind

2, Chapter 3 Lecture Notes, Videos and Podcasts

****Chapter 3. Inside the entrepreneurial mind: From ideas to reality****

****Part 1: Learning Objectives****

1. Explain the differences among creativity, innovation, and entrepreneurship.
2. Describe why creativity and innovation are such an integral part of entrepreneurship.
3. Understand how the two hemispheres of the human brain function and what role they play in creativity.
4. Explain the 10 “mental locks” that limit individual creativity.
5. Understand how entrepreneurs can enhance the creativity of their employees as well as their own creativity.
6. Describe the steps in the creative process.
7. Discuss techniques for improving the creative process.
8. Describe the protection of intellectual property through patents, trademarks, and copyrights.

****Part 2: Class Instruction****

****Introduction****

One of the tenets of entrepreneurship is the ability to create new and useful ideas that solve the problems and challenges that people face every day. As Chapter 1 discussed, entrepreneurs can create value in a number of ways. For example, entrepreneurs invent new products and services, develop new technology, discover new knowledge, improve existing products or services, and find different ways of providing more valuable goods and services with fewer resources.

****Creativity, Innovation, and Entrepreneurship        LO 1****

***Creativity*** is the ability to develop new ideas and discover new ways of looking at problems and opportunities. A study conducted by the U.S. Small Business Administration reports that small companies produce 16 times more patents per employee than their larger rivals.  The secret is to apply creativity and innovation to solve problems and exploit opportunities that people face every day.

***Innovation*** is the ability to *apply* creative solutions to problems and opportunities that enhance or enrich people’s lives. Entrepreneurs succeed by *thinking* and *doing* new things or old things in new ways.  Some create innovations *reactively* in response to customer feedback or changing market conditions, and others create innovations *proactively*, spotting opportunities on which to capitalize.  Innovation is *evolutionary*, developing market-sustaining ideas that elaborate on exiting products, processes, and service.

Entrepreneurial innovation encompasses not only new products and service, but also new business models.

      Entrepreneurship is the result of a disciplined, systematic process of applying creativity and innovation to needs and opportunities in the marketplace. Innovation must be a constant process because most ideas do not work and most innovations fail.

****Creativity – Essential to Survival                                LO 2****

Creativity is an important source for building a competitive advantage and for survival.

Companies that fail to become engines of innovation are more likely to lose ground to their more creative competitors and ultimately become irrelevant and close their doors.

Making the leap from what has worked in the past to what will work today (or in the future) requires entrepreneurs to cast off their limiting assumptions, beliefs, and behaviors and to develop new insights into the relationship among resources, needs, and values.

A creative exercise, shown in Figure 3.1, “How Creative Are You?” can be used to explore aspects of creativity.

These are the solutions to Figure 3.1, How Creative Are You?  These are the well-known phrases these symbols represent.

|  |  |  |  |
| --- | --- | --- | --- |
| Hold out for more | Overcoming the odds | Cover your bases | It’s on the tip of my tongue |
| Back to-back home runs | Side effects of medication | Going back to work | Not the same without you |
| Nothing between the ears | Break the rules | Space travel | Might makes right |
| Raising the bar | Wrap-around sun glasses | The inside scoop | Mail-in rebate |
| Head in the sand | Shouting at the top of your lungs | Downright silly | Buckle down and study |
| Play on words | Small wonder | Foreign language | Runs in the family |
| Grow up and settle down | On the road to recovery | Man about town | Overnight delivery |
| Throw in the towel | Toe the line | Jockey for position | Leave well enough alone |

Sources:  Tery Stickels, “Frame Games,” *USA Weekend*, August 12-14, 2005, p. 30; August 19-21, 2005, p.18; June 13-15, 2003, p. 26; October 17-19, 2003, p. 18; October 31-November 2, 2003, p. 22; February 27-29, 2004, p. 18; May 14-16, 2004, p. 30; November 26-28, 2004, p. 18; August 20-22, 2004, p.15; October 22-24, 2004, p. 26; March 4-6, 2—5, p. 15; April 8-10, 2005, p. 23; May 6-8, 2005, p. 19; October 8-10, 2004, p. 19; January 23-25, 2004, p. 14.

****Can Creativity Be Taught?****Research shows that anyone can learn to be creative. Author Joyce Wycoff believes everyone can learn techniques and behaviors that generate ideas.  Not only can entrepreneurs and the people who work for them learn to think creatively, but they must for their companies’ sake!

****Consider using You Be the Consultant “10 Keys to Business Innovation” at this point.****

****Creative Thinking                                                  LO 3****

Research into the operation of the human brain shows that each hemisphere of the brain processes information differently.  One side of the brain tends to be dominant over the other. The human brain develops asymmetrically, and each hemisphere tends to specialize in certain functions. The left–brain handles language, logic, and symbols. The right brain takes care of the body’s emotional, intuitive, and spatial functions.

Right–brained lateral thinking is somewhat unconventional, unsystematic, and relies on kaleidoscope/lateral thinking. This describes the process of considering a problem from all sides and jumping into it at different points.  The right brain processes information intuitively – all at once, relying heavily on images.

Left–brained vertical thinking is narrowly focused and systematic, proceeding in a highly logical fashion from one point to the next. Left–brain thinking is guided by a linear, vertical thought process progressing from one logical conclusion to the next.

It is this right-brain driven, lateral thinking that lies at the heart of the creative process.   Those who have learned to develop their right–brained thinking skills tend to:

* Ask the question: “Is there a better way?”
* Challenge custom, routine, and tradition
* Be reflective, often staring out windows, deep in thought.
* Be prolific thinkers.  Generating lots of ideas increases the likelihood of coming up with a few highly creative ideas.
* Play mental games, trying to see an issue from different perspectives.
* Realize there is more than one “right answer.”
* See mistakes a mere “pit stops” on the way to success.
* See problems as springboards for new ideas.
* Understand that failure is a natural part of the creative process.
* Have “helicopter skills”, the ability to rise above the daily routine to see an issue from a broader perspective and then swoop back down to focus on an area in need of change.

An individual can learn to control which side of the brain is dominant in a given situation.  A person can learn to “turn down” the dominant left hemisphere (focusing on logic and linear thinking) and “turn up” the right hemisphere (focusing on intuition and unstructured thinking) when a situation requiring creativity arises.   Entrepreneurs can learn to tap their innate creativity by breaking down the barriers to creativity that most of us have.  Refer to Figure 3.2, What Do You See?

Entrepreneurship requires both left– and right–brained thinking.

****Barriers to Creativity                                          LO 4****

There are limitless barriers to creativity—time pressures, unsupportive management, pessimistic coworkers, overly rigid company policies, and countless others.

The most difficult hurdles to overcome are those that individuals impose upon themselves. In his book, *A Whack on the Side of the Head*, Roger von Oech identifies ten “mental blocks” that limit individual creativity. They are as follows:

1. Searching for just one right answer
2. Focusing on being logical
3. Blindly following rules
4. Constantly being practical
5. Viewing play as frivolous. ***Myopic thinking*** is a common killer of creativity; being narrowly focused and limited by the status quo.
6. Becoming overly specialized
7. Avoiding ambiguity
8. Fearing looking foolish
9. Fearing mistakes and failure
10. Believing that “I’m not creative”

Questions to spur the imagination are presented in Table 3.1. Questions to Spur the Imagination include:

1. Is there a new way to do it?
2. Can you borrow or adapt it?
3. Can you give it a new twist?
4. Do you merely need more of the same?
5. Do you need less of the same?
6. Is there a substitute?
7. Can you rearrange the parts?
8. What if you do just the opposite?
9. Can you combine ideas?
10. Are customers using your product or service in ways you never expected or intended?
11. Which customers are you not servicing? What changes to your product or service are necessary to reach them?
12. Can you put it to other uses?
13. What else could we make from this?
14. Are there other markets for it?
15. Can you reverse it?
16. Can you rearrange it?
17. Can you put it to another use?
18. What idea seems impossible, but if executed, would revolutionize your business?

****How to Enhance Creativity                                LO 5****

****Enhancing Organizational Creativity.****  Creativity doesn’t just happen in organizations; entrepreneurs must establish an environment in which creativity can flourish – for themselves and for their workers.  New ideas are fragile creations, but the right organizational environment can encourage people to develop and cultivate them.  Refer to Figure 3.3 for a list of the Factors That Contribute to Companies’ Ability to Innovate.

Ensuring that workers have the freedom and the incentives to be creative is one of the best ways to achieve creativity.  Entrepreneurs can stimulate their own creativity and encourage it among workers by:

* Including creativity as a core company value and make it an integral part of the company’s culture.
* Hiring for creativity
* Establishing an organizational structure that nourishes creativity
* Embracing diversity
* Expecting creativity
* Expecting failure and learning from it
* Incorporating fun into the work environment
* Encouraging curiosity
* Designing a work space that encourages creativity
* View problems as opportunities
* Providing creativity training
* Eliminating bureaucratic obstacles and providing the support necessary for innovation. ***Intrapreneurs*** are entrepreneurs who operate within the framework of an existing business and can sometimes transform a company’s future or advance its competitive edge.
* Developing a procedure for capturing ideas
* Talking with and interacting with customers
* Monitoring emerging trends and identifying ways your company can capitalize on them
* Looking for uses for your company’s products or services in other markets
* Rewarding creativity
* Modeling creative behavior
* Not forgetting about business model innovation

****Enhancing Individual Creativity****. You can enhance individual creativity by using the following techniques:

* Allow yourself to be creative
* Forget the “rules”
* Give your mind fresh input every day
* Take up a hobby
* Travel and observe
* Observe the products and services of other companies, especially those in completely different markets
* Recognize the creative power of mistakes and accidents
* Notice what is missing
* Look for ways to turn trash into treasure
* Keep a journal handy to record your thoughts and ideas
* Listen to other people
* Listen to customers
* Get adequate sleep
* Watch a movie
* Talk to a child
* Do something ordinary in an unusual way
* Keep a toy box in your office
* Take note of your “pain points”
* Do not throw away seemingly “bad” ideas
* Collaborate with others
* Read books on stimulating creativity or take a class on creativity
* Doodle
* Take some time off
* Be persistent

Refer to the *Hands On… How To* feature for more suggestions.

****The Creative Process                                           LO 6****

Although new ideas may appear to strike like a bolt of lightning, they are actually the result of the creative process. The creative process involves seven steps:

1. Preparation to get the mind ready for creative thinking. Suggestions include:
   * Adopt the attitude of a lifelong student
   * Read a lot
   * Clip interesting articles and create a file for them
   * Take time to discuss your ideas with others
   * Join and attend meetings of professional or trade associations
   * Develop listening skills
   * Eliminate creative distractions
2. This requires one to develop a solid understanding of the problem.
3. This involved viewing the similarities and differences among the information collected.  ***Convergent thinking***is the ability to see similarities and the connections among various data and events.  ***Divergent thinking*** is the ability to see among various data and events.
4. Incubation refers to the need to have time to reflect on the information collected, and may include walking away from the situation daydreaming, relaxing and playing, dreaming during sleep, or working on the problem in a different environment.
5. Illumination refers to the proverbial light bulb turning on, and happens sometime during the illumination stage.
6. Verification refers to the steps taken to validate an idea as realistic and useful by asking questions such as:
   * Is it really a better solution?
   * Will it work?
   * Is there a need for it?
   * If there is a need, what is the best application in the marketplace?
   * Does this idea fit into our core competencies?
   * How much will it cost to produce or provide?
   * Can we sell it at a reasonable price that will product adequate sales, profit, and returns on investment?
   * Will people buy it?
7. Implementation refers to transforming the idea into reality. What sets entrepreneurs apart is that they act on their ideas.

****Techniques for Improving the Creative Process LO 7****

****Brainstorming****.  Teams of people working together usually can generate more and more creative ideas.***Brainstorming*** is a process in which a small group interacts with very little structure with the goal of producing a large *quantity* of novel and imaginative ideas. For a brainstorming session to be successful, an entrepreneur should follow these guidelines:

* Keep the group small—five to eight members
* Make the group as diverse as possible
* Encourage participants to engage in some type of aerobic exercise before the session
* Company rank and department affiliation are irrelevant
* Give the group a well–defined problem to address
* Provide the group relevant background information about the problem in advance. Invite them to provide at least three ideas by e-mail prior to the brainstorming session.
* Limit the session to 40 to 60 minutes
* Take a field trip to visit the scene of the problem
* Appoint someone the job of recorder
* Use a seating pattern that encourages communication and interaction
* Throw logic out the window
* Encourage *all* ideas from the team, even wild and extreme ones
* Establish a goal of quantity of ideas rather than quality
* Forbid evaluation or criticism
* Encourage “idea hitch–hiking”
* Dare to imagine the unreasonable

****Mind-Mapping.***Mind–mapping*** is an extension of brainstorming. Mind–mapping is a graphical technique that encourages thinking on both sides of the brain, visually displays the various relationships among ideas, and improves the ability to view the problem from many sides. It relates to the way the brain actually works. Rather than throwing out ideas in a linear fashion, the brain jumps from one idea to another. In many creative sessions, ideas are rushing out so fast that many are lost if a person attempts to shove them into a linear outline.  The mind–mapping process works this way:

* Sketch a picture symbolizing the problem in the center of a large blank page
* Write down every idea that comes to your mind, connecting each idea to the central picture or words with a line. Use key words and symbols
* When idea flow starts to trickle, stop
* Allow your mind to rest a few minutes, and then begin to integrate the ideas into a mind map.

****Force Field Analysis****.  This technique is useful to evaluate the forces that support and oppose a proposed change.  It addresses the problem to solved, the driving forces, and the restraining forces. Refer to Figure 3.4, Sample Force Field Analysis.

****TRIZ.****  This is a systematic approach to solve any technical problem and relies on 40 principles and left–brain thinking to solve problems. Refer to Figure 3.5, TRIZ Contradiction Matrix.

***Rapid prototyping*** is the process of creating a model of an idea, enabling an entrepreneur to discover flaws in the idea and to make improvements in the design.  The three principles of rapid prototyping are “The Three R’s”: *rough, rapid, and right.*

****Intellectual Property: Protecting Your Ideas             LO 8****

Entrepreneurs must understand how to put patents, copyrights and trademarks to work for them. The World Trade Organization estimates that between 5 and 7 percent of all goods traded globally are counterfeit.  Refer to Table 3.2, Top Counterfeit Products Seized by U.S. Customs Agents.

****Patents.****A***patent*** is a grant from the federal government’s Patent and Trademark Office (PTO), to the inventor of a product, giving the exclusive right to make, use or sell the invention in this country for 20 years from the date of filing the patent application.

* Most patents are granted for new product inventions (called *utility patents*), but *design patents* extending for 14 years beyond the date the patent is issued, are given to inventors who make new original and ornamental changes in the designs of existing products that enhance their sales.
* Inventors who develop a new plant can obtain a plant patent (by grafting or cross–breeding, not planting seeds).
* To be patented, a device must be new (but not necessarily better!), not obvious to a person of ordinary skill or knowledge in the related field, and useful. Refer to Figure 3.7, A Sample (and Unusual) Patent.
* A device cannot be patented if it has been publicized in print anywhere in the world, or if it has been used or offered for sale in this country prior to the date of the patent application.
* A patent goes to the first person to file a patent application.
* Before beginning the lengthy process of applying for a patent, it is best to seek the advice of a patent agent or attorney who is registered with the Patent and Trademarks Office.

Refer to Figure 3.6 for Patent Applications and Patents Issued, which graphs the number of patent applications from 1975 to 2011.

A list of registered patent, copyright and trademark professionals are available at: [http://www.uspto.gov/web/offices/dcom/olia/oed/roster/ (Links to an external site.)](http://www.uspto.gov/web/offices/dcom/olia/oed/roster/" \t "https://fisk.instructure.com/courses/1910/pages/_blank)

* The Patent Process. To receive a patent, an inventor must follow these steps:

1. Establish the invention’s novelty
2. Document the device
3. Search existing patents
4. Study search results
5. Complete a patent application
6. File the patent application

In addition, the inventor must be prepared to defend a patent against “copycat producers”.  This can be expensive and time consuming but often is necessary to protect an entrepreneur’s interest.

****Trademark****.  A ***trademark*** is any distinctive word, phrase, symbol, design, name, logo, slogan, or trade dress that a company uses to identify the origin of a product or to distinguish it from other goods on the market. A ***service mark*** offers the same protection as a trademark, except that it identifies and distinguishes the source of a service rather than a product. Refer to Figure 3.8, Trademark Applications and Trademarks and Renewals Issued.

***Trade dress*** is the unique combination of elements that a company uses to create a product’s image and to promote it.  For example, a restaurant’s particular décor, color schemes, design and overall look and feel constitute its trade dress.  To be eligible for trademark protection, trade dress must be inherently unique and distinctive to a company.

A trademark prevents other companies from employing a similar mark to identify their goods.  The first party who either uses a trademark in commerce or files an application with the PTO has the ultimate right to register that trademark.  Trademarks last indefinitely as long as the holder continues to use it.

****Copyright****.  A ***copyright*** is an exclusive right that protects the creators of original works of authorship such as literary, dramatic, musical, and artistic works (e.g., art, sculptures, literature, software, music, videos, video games, choreography, motion pictures, recordings and others). Just as with a trademark, obtaining basic copyright protection does not require registering the creative work, but it is smart to do so.  Entrepreneurs file copyright applications with the Copyright Office in the Library of Congress.

Refer to Table 3.3, Characteristics of Patents, Trademarks, and Copyrights.

Protecting intellectual property is imperative. Unfortunately, not every businessperson respects the rights of ownership to products, processes, names, and works. The dynamics of the global market makes protecting intellectual property even more challenging. The primary weapon is efficient use of the legal system. Before bringing a lawsuit, an entrepreneur must consider the following issues:

* Can the opponent afford to pay if you win?
* Will you get enough from the suit to cover the costs of hiring an attorney?
* Can you afford the loss of time and privacy from the ensuing lawsuit?

Refer to the Hands On… How To feature for more information on protecting your company’s intellectual property.

****Consider using You Be the Consultant: “How Would You Rule in These Intellectual Property Cases?” at this point.****

****Conclusion****

The creative process is a tenant of the entrepreneurial experience. Success, and even survival itself, requires entrepreneurs to tap their creativity. The seven steps of the creative process allow the entrepreneur to transform an idea into a business reality.

1. Preparation
2. Investigation
3. Transformation
4. Incubation
5. Illumination
6. Verification
7. Implementation

Creativity results in value and value provides a competitive advantage. Entrepreneurs should protect their creative ideas through patents, trademarks, servicemarks, and copyrights to sustain a competitive edge.