

Chapter

6

CREATIVITY AND INNOVATION IN ENTREPRENEURSHIP

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Introduction

Opportunity identification is central to the domain of entrepreneurship, and understanding what opportunity exactly means is one of the primary challenges within the domain of entrepreneurship research. At its core, entrepreneurship revolves around the question why, when and how opportunity recognition for the creation of goods and services arise in the future of a given economy. This opportunity recognition is the progenitor of both societal and personal wealth (Kuratko, 2009). No entrepreneur or enterprise, however successful and big, can continue to hold a place of leadership unless it recognizes that modern business operates in a world of dynamic changes which creates new problems, risks and opportunities. Consequently, entrepreneurs have to mobilize the available resources before these changes can make their impact felt. To do so successfully, the entrepreneur should know where his or her firm is going and how the firm intends to get there. Over the years, creativity and innovation has been identified as the corner stone of survival and growth of enterprising firms in the competitive market arena, (Kuratko, 2009). This chapter, therefore, gives an insight into the twin concept of creativity and innovation particularly as it relates to entrepreneurship. The chapter, specifically, intends to afford readers a better understanding of:

- the concept, theory and principles of creativity
- the critical thinking process that underlies creativity
- the creative problem solving techniques necessary for improvement of the creative thinking process
- the tools and techniques for creative problem solving
- the concept, theory and underlying principles of innovation
- the elements, types and forms of innovation
- creativity and innovation in an entrepreneurial organization

Creativity

Creativity is the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a new method or device, or a new artistic object or form (Okpara, 2007). It is also widely described as the ability to develop new ideas and to discover new ways of looking at problems, threats and opportunities. Creativity is also seen as the generation of ideas that result in the improved efficiency and effectiveness of a system. Two important aspect of creativity exist: process and goal. A process is goal oriented; it is designed to proffer a solution to a problem. The people are the resources that determine the solution. The process remains the same but the approach that people use will differ (Kuratko, 2009). Creative outcomes seldom emerge in an instant; a recognized process is involved, even if it appears to be rather chaotic. It begins with recognition of a problem or anticipation of an opportunity, and then, through understanding the situation and reflecting on the issues, new linkages are contemplated and possible new combinations of components are considered. From this emerge visible solutions or possibilities that are subjected to valuation, which may be continuous, with judgment being suspended while the search process is prolonged in pursuit of genuine newness, (Mihaly, 1997). Entrepreneurs take bold creative steps but situations encourage creativity. Creativity is, however, enhanced when people have some freedom, but not too much; high internal commitment to the task; but not too high a commitment; high proportion of intense rewards, but some extrinsic rewards as well; some competition but not the type of "winner takes-it-all" competition (Thompson, 2007).

The Principles of Creativity

According to Isaksen, Dorval and Treffinger (1994), people become more creative when they feel motivated primarily by the interest, satisfaction, passion and interest, a person's sense of challenge, challenges of the situation (and not by external pressures), a person's internal desire to do something unique to showcase him/herself or the drive to crack a problem that no one else has been able to solve. Isaksen et al (1994) noted that every individual's level of creativity is a function of three components:

1. Expertise
2. Creative thinking skills
3. Motivation.

Expertise encompasses everything that a person knows and can do in the broad domain of his or her work- knowledge and technical ability.

Creative thinking refers to how you approach problems and solutions- the capacity to put

existing ideas together in new combinations. The skill itself depends quite a bit on personality as well as on how a person thinks and works. Expertise and creative thinking are the entrepreneur's raw materials or natural resources.

Motivation is the drive and desire to do something, an inner passion and interest. When people are intrinsically motivated, they engage in their work for the challenge and enjoyment of it; by implication the work itself must be motivating. People will be most creative when they feel motivated primarily by the interest, satisfaction and the challenge of the work itself; this is reflected by the following phrases: "the labour of love", "love of the work", "the enjoyment of seeing and searching for an outstanding solution, a breakthrough", "the Eureka factor-I have found it" etc.

The Creative Brain

The creative process involves seven stages – preparation, investigation, transformation, incubation, illumination, verification and implementation, (Zimmer and Scarborough, 2013). A high level of general intelligence, domain specific knowledge and special skills are necessary pre-requisites. The process of creative innovation (incubation and illumination stages) necessitates the need for an ability of divergent thinking, a novelty seeking behaviour, some degree of suppression of latent inhibition and a subtle degree of frontal dysfunction. These features are often inter-linked and subtle frontally uninhibited behaviour which is conducive towards creativity by allowing uninterrupted flow of creative thought possessing and opening up new avenues towards problem solving. Perhaps the most essential feature of the creative brain is that each hemisphere of the brain processes information differently and that one side of the brain tends to be dominant over the other (Buzan, 1974). According to Buzan the human brain develops asymmetrically, and each hemisphere tends to specialize in certain functions. The left-brain is guided by linear, vertical thinking (from one logical conclusion to the next); whereas the right brain relies on kaleidoscopic, lateral thinking (considering a problem from all sides and jumping into it at different points). The left-brain handles language, logic, and symbols; the right-brain takes care of the body's emotional, intuitive, and spatial functions. The left-brain processes information in a step-by-step fashion, but the right-brain processes it 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. Right-brained lateral thinking, on the other hand, is somewhat unconventional, unsystematic, and unstructured, much like the image of kaleidoscope whirling around to form one pattern after another. Right brain-driven lateral thinking lies at the heart of creative process. Those who have learned to develop their right-brained thinking skills tend to always ask the question "is there a better way. According to (Zimmer and Scarborough, 2013) the following are the outline a creative mind should possess:

Be reflective, often staring out of the windows, deep in thought. (How many traditional managers would stifle creativity by snapping these people out of their "daydreams," chastise them for "loafing," and admonish them to "get back to work?"

Be prolific thinkers, knowing that generating lots of ideas increase the likelihood of coming up with a few highly creative ideas.

Although each hemisphere of the brain tend to dominate in its particular functions, the two halves normally cooperate, with each part contributing its special abilities to accomplish those task best suited to its mode of information processing. Sometimes, however, the two hemispheres may even compete with each other, or one half may choose not to participate. Some researchers have suggested that each half of the brain has the capacity to keep information from other! The result, literally, is that "the left hand doesn't know what the right hand is doing." Perhaps the most important characteristics of this split-brain phenomenon are that an individual can learn to control which side of the brain is dominant in a given situation. In other words, a person can learn to turn down" the dominant 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, (Zimmer and Scarborough, 2013).

Successful entrepreneurship requires both left- and right brained thinking. Right brained thinking draws on the power of divergent reasoning, which is the ability to create multitude of original, diverse ideas. Left-brained thinking counts on convergent reasoning, the ability to evaluate multiple ideas and choose the best solution to a given problem. Entrepreneurs need to rely on right -brain thinking to generate innovative product, service, or business ideas. Then they must use left-grain thinking to judge the market potential of the ideas they generate. Successful entrepreneurs have learned to coordinate the complementary functions of each hemisphere of the brain, using their brain's full creative power to produce pragmatic innovation. Otherwise, entrepreneurs, who rarely can be accused of being "half-hearted" about their business ideas, run the risk of becoming "half headed", (Zimmer and Scarborough, 2013).

Characteristics of being Creative

According to Silvano (1976) creative entrepreneur should possess the following characteristics as shown in figure 1 below:

Fig. 1: Characteristics of Being Creative



Source: Adapted from Silvano (1976) Creative Approaches to Problem Solving

Creative Thinking

Creative thinking as defined by Okpara (2007) is the act of generating solution to problems by the force of imagination and reasoning. It is an ability of the mind seeking to find answers to some life's questions. In a dynamic and changing world, the challenges of man are not static. They take on new forms and require a deep understanding of the creative approach. According to Okpara (2007), every idea is a product of thinking and every product is the manifestation of idea naked in a thinker's mind. These are people who see problems as opportunities to improve and do something new or something better; people who keep these two vital questions on their mind, "What can I do to make things better, or what can I do to make better things?". This is the product of thinking. In making things better, the goals are usually to improve productivity and efficiency, achieve speed, enhanced comfort and convenience, influence returns positively, and so much more. While in making better things, thinking can produce various alternatives leading to making better things; thinking can produce various alternatives leading to the evolution of a completely new idea, new production processes, or a total departure from the conventional. Whatever the goal, thinking is an indispensable tool in the life of all successful entrepreneurs.

Thinking begins with engaging yourself in a conversation with yourself by yourself, in yourself. That is to reach a conviction and conclusion as to what steps to take and what strategies to employ. It is advisable to always have a pen and paper at hand to document your thoughts. It unveils every illusion around you. The place of asking the right and relevant questions in thinking process cannot be overemphasized. Questions remain the string tool to provoke the mind to respond to issues and discover new things. Creativity comes in when you expand upon it, take the idea and make it move. There is nothing wrong with learning from others ideas. However, being able to adapt ideas is what makes an entrepreneur successful. Applying creative thinking can help resolve mankind's crying need for basic products, basic support services, better homes, better jobs, and a better way of life. Creative thinking must, therefore, lead to the articulation of a strategy. A strategy is a way of organizing available resources to achieve results, what to do, what steps to take, the approach, the timing and positioning; all these come to play when developing strategy. It is a common knowledge that successful entrepreneurs emerge not by strength or force but by superior strategy through creative thinking (Okpara, 2007). As noted by Okpara (2007), celebrating achievements of great investors were not necessarily by accident but by product of deep creative thinking that has delivered the visible products we see and enjoy today. Clear examples in this regard are Bill Gates (the computer), Steve Job (the computer), the Wright brothers (Aeroplane), Ford (Moto car), Rock Fellers (oil drilling), Edison (electricity), Graham Bell (telephone), Michael Faraday (electricity), Isaac Newton (physical law of science), Adenuga (Consolidated oil), Atedo Peterside (Investment Banking), Raymond Dopkesi (Daar Communications) etc; the list is endless. It is necessary to know that we live in a thinker's world. It is therefore, not surprising to see that the men and women who are ahead are those who see ahead with their minds' eyes! These are men and women who have engaged their minds in resourceful thinking to generate ideas and products, which have stood the test of time.

Areas of Human creativity in an Organization

According to Kuratko (2009), individuals in organization can channel their creativity into 7 different areas namely:

- i. Idea creativity: thinking of a new idea or concept such as an idea for new product of service or a way to solve a problem.
- ii. Material creativity: inventing and building a tangible object such as a product, a report or a photograph.
- iii. Organization creativity: organizing people or project and coming with new organizational form or approach to structuring things.
- iv. Relationship creativity: an innovative approach to achieving collaboration, cooperation and win-win relationship with others

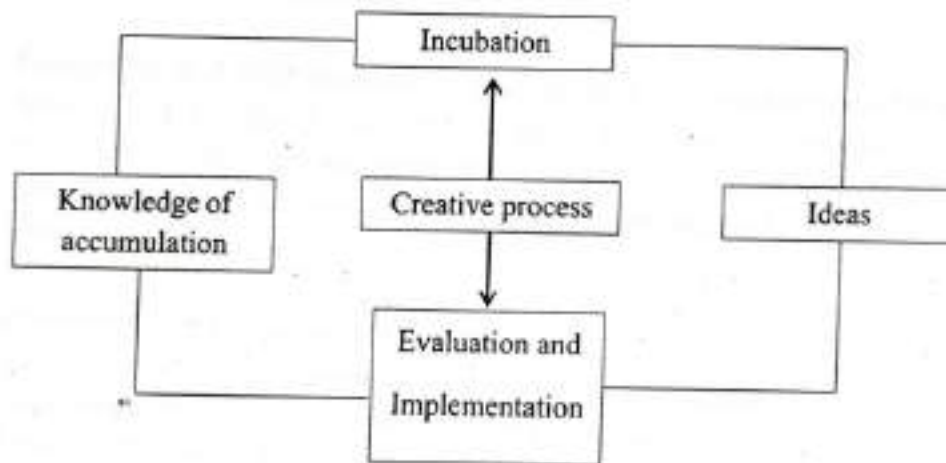
- v. Event creativity: producing event such as award ceremony, team outing or annual meeting.
- vi. Inner creativity: changing ones inner self and be opened to new approaches to how one does things about oneself in different ways.
- vii. Spontaneous creativity: acting in a spontaneous or spur of the moment, such as coming up with a witty response in a meeting or making an off the cuff speech

The Critical Thinking Process

There are two aspects of creativity, that is, the process and people. Process is defined as the particular goal(s) intended to be achieved while people are the resources that are used to achieve these goals. The thinking process has four commonly agreed steps (Kuratko, 2009):

- i. Background / knowledge accumulation
- ii. Incubation process
- iii. Idea experience
- iv. Evaluation and implementation

Fig.2: Thinking Process in Creativity



Source: Adapted from Kuratko, (2009) Creative Approach of Thinking Process

1. Accumulation of Knowledge: This involves extensive reading, conversation of experts, professional meetings and lectures and a general assumptions of information relating to the problem or history under such a study.
2. Incubation: Incubation process often occurs when individual engaged in activities totally unrelated to the subject or problems.

The following are the steps involves in inducing incubation as enumerated by Kuratko (2009):

- i. Engage in routine mindless activities
 - ii. Exercise regularly
 - iii. Play
 - iv. Think about the problem before falling asleep
 - v. Practice self-hypnotize.
3. Idea : This is often known as the creative process which is mostly gotten before the solution an individual is seeking being discovered.

The following are ways to speed up idea as identify by Kuratko (2009):

- i. Daydream the problem
 - ii. Practice your hobby
 - iii. Work in a leisurely environment
 - iv. Put the problem on the back corner
 - v. Keep a note close every time to record at any time (e.g. late night or early morning)
 - vi. Ensure break while working
4. Evaluation and Implementation: Evaluation is the assessment of the success or failure of a particular objective or goal. A successful entrepreneur can easily identify ideas that are workable and have the skill to implementing it. But where failure is noticed an adjustment can be made successful to accomplishing the stated objectives.

Things to be done before implementing an idea:

- i. Increase your energy level with proper exercise, diet and rest
- ii. Educate yourself in the business planning process
- iii. Test your idea with knowledgeable people
- iv. Educate yourself in selling process
- v. Seek advice from others
- vi. Learn about the organizational policies and practices.

Blocks and Barriers to Creative Thinking

Blocks and barriers to creative thinking refer to issues or activities that hinder an entrepreneur to learn and tap their innate creativity. The first step is to break the barriers to creativity that most of us have created over the years. We now turn our attention to these

barriers and some suggested techniques for tearing them down. There are three broad overlapping categories of blocks as explain by McFadzean (1998):

- i. **Personal blocks:** This explain lack of self-confidence or self-image; a tendency to conform; a need for the familiar, habit-bound thinking; emotional numbness; saturation; excessive enthusiasm; various values and cultural influences and lack of imaginative control.
- ii. **Problem-solving blocks** are strategies, skills, or behaviours that inhibit ability to focus and direct problem-solving activities, generate and identify options and alternatives, or turn ideas into action. Examples of these include: solution fixedness, premature judgments, habit transfer, using poor problem-solving approaches, lack of disciplined effort, poor language skills, various perceptual patterns that limit intake and rigidity.
- iii. **Environmental blocks** are those factors in your context, situation, or setting that interfere with your problem-solving efforts. This include: the belief that only one type of thinking is required for creative outcomes, resistance to new ideas, isolation, a negative attitude toward creative thinking, autocratic decision making, reliance on experts, and various strategic blocks that limit the use of resources

Specific Barriers to Creativity

Zimmer and Scarborough (2013) listed the following specific barriers to creativity:

1. Searching for the right answer
2. Focusing on being logical
3. Blindly following the rules
4. Constantly being practical
5. Viewing play as frivolous
6. Becoming overly specified
7. Avoiding ambiguity
8. Fearing mistakes and failure

Creativity Tools for overcoming Barriers

Creativity tools for tearing down barriers can be classified in many different manners. McFadzean (1998) has developed a framework for classifying creativity tools using three categories:

- i. **Paradigm preserving:** i.e. where neither new elements nor relationships between the elements of the problem are introduced.
- ii. **Paradigm stretching:** i.e. where either new elements are introduced or new relationships between the elements of the problem are conceived, tools include-checklists, metaphor, role storming, heuristic ideation technique and reversal.

- iii. Paradigm breaking: i.e. where both new elements and new relationships between the elements are introduced, tools include- picture stimulation, rich pictures, and imagining etc.

Creative Approaches to Problem Solving

In problem-solving, the barriers that block solutions must be addressed. Thus, in problem solving, do a bit of divergent thinking, and information gathering before selecting a solution and taking an action. All entrepreneurs require a lot of analytical thinking and creativity in problem solving (Isaksen et al, 1994)

Definition of Problem

A problem is a condition that is not acceptable. It may involve tangible and/or intangible elements such as people, processes, systems, states of affair, products, circumstances, or any business or personal situation. The term "problem" simply refers to any discrepancy between the current situation and a desired future situation (Isaksen et al, 1994).

Three common types of problems were identified by Isaksen et al, 1994:

- i. It's Broken: An unsatisfactory change in the status quo.
- ii. It's Boondoggled: An inability to achieve an expected result.
- iii. It's Just Messy: There is a lack of clarity. Current understanding is insufficient.

Examples of problems: bad product, bad vision, customer dissatisfaction, poor sales, low profit, low revenue, loss of corporate image.

Creative Problem Solving (CPS) Technique

CPS is a technique to approach a problem or address a challenge in an imaginative way; it helps us flex our minds, find path-breaking ideas and take suitable actions thereafter. CPS can be used to look for interesting, out-of-the-box solutions to problems. To qualify as CPS, the solution must solve the stated problem in a novel way, and the solution must be reached independently (Williams, 1998). Creative problem solving tools help us flex our minds, redefine the problems we face, find path-breaking ideas and take suitable actions thereafter. It's all about overcoming our mind's conceptual blocks and finding multiple solutions to effectively solve a problem that we face (Forbes, 2014).

CPS Versus Routine Problem Solving Process

- The creative problem solving process differs from routine problem solving in that in

routine problem solving a pre-established method for solving the problem is used. With creative problems solving, any pre-established method for solving the problem is either unknown or not used.

Creative problem solving involves a hunt for new solutions, while routine problem solving uses old, (Williams, 1998).

Creative Approaches to Problem Solving

Williams (1998) identified the following as examples of Creative Approaches to Problem Solving:

- Having idea power: This involves generating many, varied, and unusual ideas that have high potential to address the problem or meet the challenge in a fresh and valuable way.
- Being persistent: This involves investing energy and talent in taking a wild or highly unusual idea and shaping, refining, and developing the idea into a workable solution.
- Considering aspects of the situation surrounding the solution to enable agreement of your solutions by others.
- Being sensitive to the context and the people who may be involved with your solution and working to obtain support and acceptance.
- Having a variety of possible approaches to take for any given situation, challenge, or problem. Being aware of the power of process.
- Reflecting on many different factors in determining your technique

Non-Creative Approaches to Problem Solving

Williams (1998) identified the following as examples of non-Creative Approaches to Problem Solving:

- Mindlessly defending the status quo.
- Being resistant to exploring new opportunities.
- Making and acting on faulty assumptions or incorrect data.
- Seeing the problem or challenge in only one way.
- Overlooking the need to improve, develop, or refine a tentative solution.
- Moving on before ensuring agreement and acceptance by others.
- Premature completion or conclusion.
- Using an approach uncritically, just because it may have provided relief or results before.
- Reacting to a situation before reflecting on alternative ways of responding

Definition of Solution

A solution is a man-made resolution to a problem. There are two common types of

solutions (Isaksen, 1994):

- i. Bad: An unsatisfactory solution. This solution is more costly than desired, it creates new problems, or it doesn't last, someone invariably loses.
- ii. Good: This is a satisfactory solution to a problem. The desired objective is achieved within acceptable parameters and it last.

Creative Solution

The creative solution: Many times a solution is considered creative if components that are readily available can be used, and when there is a short time limit within which to solve the problem. The solution must solve a stated problem in a novel way, and the solution must be reached independently. The following are types of creative solutions as identified by (Isaksen, 1994):

1. Innovations: "All innovations (begin) as creative solutions, but not all creative solutions become innovations" (Richard, 2014).
2. Inventions: If an innovation is unique, original and novel, it is considered an invention. It must be original - not known to people who are knowledgeable in the field of the solution.

What is a Creative Technique?

A technique is simply the way you move toward, advance, or come closer to something. It is a way of making change happen. A creative technique implies that you are attempting to advance toward an outcome that is new. With knowledge and skills for evaluation, a creative approach requires engagement of one's imagination, intelligence, courageous attitude because no ready-made answer exists, Zimmer and Scarborough (2013).

Fig. 3: Creativity and Innovation Techniques

CREATIVITY	INNOVATION
Imagination	Implementation
Process	Product
Generating	Developing
Novelty	Usefulness
Soft	Hard

Source: (Silvano, 1976)

Techniques for Improving the Creative Thinking Process

Teams of people working together usually can generate more and more-creative ideas. According to Zimmer and Scarborough (2013), four techniques that are especially useful for improving the quality of creative ideas from teams are brainstorming, mind mapping, Theory of Inventive problem solving (TRIZ- pronounced 'trees'), and rapid prototyping.

Brainstorming

- The brainstorming technique is based on the capacity of the human brain to make associations.
- As in any session or meeting, there are certain rules that need to be followed in order to ensure that a brainstorming session produces good results. The session can be divided into three phases:
 - a preparation phase;
 - the brain-storming session; and
 - Evaluation and implementation of the results.

Specific steps in Brainstorming

Silvano (1976) identified the following as specific steps in Mind Mapping:

- Rules for Brainstorming:
 - The more ideas the better!
 - No discussion
 - No idea is a bad idea
 - Build on one another's ideas
 - Display all ideas

The Benefits of Brainstorming

The benefits of a well-organized brainstorming session are (Silvano, 1976):

- Solutions can be found rapidly and economically;
- Results and ways of problem-solving that are new and unexpected;
- A wider picture of the problem or issue can be obtained;
- The atmosphere within the team is more open;
- The team shares responsibility for the problem;
- Responsibility for the outcome is shared;
- The implementation process is facilitated by the fact that staff share in the decision-making process.

ii. Brain writing

Brain writing is similar to brainstorming. The only difference is that the participants are given a set of coloured sheets of paper (between 5 and 20 people) and the ideas are first written down, one idea per sheet.

iii. Mind Mapping

Mind mapping is a visual picture of a group of ideas, concepts or issues; using the mind mapping systems further enhances the brain writing method.

Specific steps in Mind Mapping

Silvano (1976) identified the following as specific steps in Mind Mapping:

- Unblock your thinking.
- See an entire idea or several ideas on one sheet of paper.
- See how ideas relate to one another.
- Look at things in a new and different way.
- Look at an idea in depth.

iv Multi-voting

- Write down the numbers of the items you feel are the major causes of the problem.
- Share your votes by a show of hands.
- Eliminate those items with the fewest votes.

v. Triz

In 1946, Genrich Altshuller, a 22-year-old naval officer in the former Soviet Union, developed a process with a name derived from the acronym for the Russian phrase that translates as "theory of inventive problem solving" or TRIZ (pronounced "trees"). TRIZ is systematic approach designed to help solve any technical problem. Unlike brain -storming and mind-mapping, which are right-brained activities, TRIZ is a left-brained, scientific, step-by-step process that is based on the study of hundreds of the most innovative patents across the globe. Altshuller claimed that these innovations followed a particular set of patterns. Unlocking the principles behind those patterns allows one not only to solve seemingly insurmountable problems, but also to predict where the next challenges would

vi. Rapid Prototyping

Generating creative ideas is a critical step in the process of taking an idea for a product or a service successfully to the market. However, entrepreneurs find out that most of their ideas would not work, and that is where prototyping plays an important part in creative process. The premise behind rapid prototyping is that transforming an idea into an actual model will point out flaws in the original idea and will lead to improvement in its design. "If a picture is worth a thousand words, prototype is worth ten thousand," says Steve Vasallo of Ideo Inc.

The three principles of rapid prototyping are the three R's: rough, rapid, and right. Models do not have to be perfect; in fact, in the early phases of developing an idea, perfecting a model usually is waste of time. The key is to make the model good enough to determine what works and what does not. Doing so allows an entrepreneur to develop prototypes rapidly, moving closer to a successful design with each iteration. The final R, right means building lots of small models that focus on solving particular problems with an idea. "You are not trying to build a complete model," says Vassallo. "You are just focusing on a small section of it", Zimmer and Scarborough (2013).

Techniques and Tools for CPS

Many of the techniques and tools for creating an effective solution to a problem can be categorized into four as outlined below (Isaksen, 1994):

- **Mental state shift:** Creativity techniques designed to shift a person's mental state into one that fosters creativity. These techniques are described in creativity techniques. One such popular technique is to take a break and relax or sleep after intensively trying to think of a solution.
- **Problem reframing:** Creativity techniques designed to reframe the problem. For example, reconsidering one's goals by asking, "What am I really trying to accomplish?" This can lead to useful insights.
- **Multiple idea facilitation:** These creativity techniques are designed to increase the quantity of fresh ideas. This approach is based on the belief that a larger number of ideas increase the chances that one of them has value.
- **Inducing change of perspective:** The creative-problem-solving techniques are designed to efficiently lead to a fresh perspective that causes a solution to become obvious. This category is especially useful for solving especially challenging problems (Osborn, 1953).

Conceptual Blocks to CPS

The following conceptual blocks (the 4Cs) can keep us from solving problems of creatively (Williams, 1998):

- (i) **Constancy:** Once we have learned a solution to a problem, we often try to reuse that solution when encountering similar problems. Creative problem solving requires being able to define and solve problems in multiple ways.
- (ii) **Commitment:** Although our minds can process a lot of information, we often get committed to overly simplistic assumptions about things.
- (iii) **Compression:** To quickly solve a problem, we often artificially limit the information we use in defining the problem and searching for solutions.

- (iv) Complacency: Sometimes we give up too easily when we encounter problems for which we don't immediately see solutions.

The following point can be used to overcome conceptual blocks (Williams, 1998):

- (i) Play around with the problem definition, state the problem as you see it and then try to see it in other ways.
- (ii) Brainstorming: produce many possible solutions.
- (iii) Training: promote creative problem solving through training.
- (iv) Pattern breaker: think beyond cognitive ruts and gain a fresh perspective on the problem.
- (v) Excursion: travelling can also be helpful.
- (vi) Shake-up: An exercise gets one out of comfort zones and more receptive to unusual ideas. It can encourage taking risks, relaxation, and new ideas

Innovation

The Oxford dictionary defines innovation as the introduction of something new or different. Innovation is the implementation of creative inspiration. The American National Innovation Initiative (NII) defines innovation as "the inter-section of invention and insight, leading to the creative of social and economic value" Innovation is "value" – the creation of value; adding value to customer's satisfaction- "delighting the customers". Innovation is the basis of all competition advantages, the means of anticipating and meeting customer's needs and the method of utilization of technology (Okpara, 2007).

Innovation comes from the Latin word 'innovare' meaning to 'to make something new'. Essentially, it is defined as adding something new to an existing product or process. The key words are adding and existing. The product or process has already been created from scratch and has worked reasonably well. When it is changed so that it works better or fulfils a different need, then there is innovation on what already exists (Mihaly, 1997). Innovation is the ability to apply creative solution to identified problems and opportunities to enhance or enrich peoples' life. It is the successful exploitation of new ideas. It is also the process of bringing the best ideas into reality, which triggers a creative idea, which generates a series of innovative events. In other words, Innovation is the process that combines ideas and knowledge into new value. You cannot innovate without creativity. Without innovation an enterprise and what it provides quickly become obsolete (Okpara, 2007). Innovation is fostered by information gathered from new connections; from insights gained by journeys into other disciplines or places; from active, collegial networks and fluid open boundaries.

Innovation arises from organizing circles of exchange, where information is not just accumulated or stored, but created. Knowledge is generated a new from connections that were not there before, Wheatley (1994). Innovation requires a fresh way of looking at things, an understanding of people, and an entrepreneurial willingness to take risks and to work hard. An idea doesn't become an innovation until it is widely adopted and incorporated into people's daily lives. Most people resist change, so a key part of innovating is convincing other people that your idea is a good one- by enlisting their help, and, in doing so, by helping them see the usefulness of the idea.

The Elements of Innovation

Innovation is the successful development of competitive advantage and as such, it is the key to entrepreneurship. The entrepreneurs are the "dreamers", who take hands on responsibility for creating innovation. It is the presence of innovation that distinguishes the entrepreneur from others. Innovation, must therefore, increase competitiveness through efforts aimed at the rejuvenation, renewal, and redefinition of organizations, their markets or industries, if business are to be deemed entrepreneurial. Amabile (1998) identified the following elements of innovation:

1. Challenge: What we are trying to change or accomplish-the "pull"
2. Customer focus: Creating value for your customers - the "Push"
3. Creativity: Generating and sharing the idea(s)- the "brain"
4. Communication: The flow of information and ideas-the "life blood"
5. Collaboration: People coming together to work together on the idea(s) - the "heart."
6. Completion: Implementing the new idea-the "muscle".
7. Contemplation: Learning and sharing lessons lead to higher competency-the "ladder"
8. Culture: The playing field of innovation includes:
 - Leadership (sees the possibilities and positions the team for action-the role model)
 - People (diverse groups of radically empowered people innovate -the source of innovation)
 - Basic values (trust and respect define and distinguish an innovative organization-the backbone).
 - Innovation values (certain values stoke the fires that make the "impossible" possible-the Spark).
9. Context: Innovation is shaped by interactions with the world.

Forms of Innovation

In a start-up, the entrepreneur is regarded as the key actor in developing a business idea, marshalling resources, and creating an enterprise to bring a new product or service to the market. In a competitive business environment, the entrepreneur and the enterprise should continue to seek out new opportunities and make the necessary arrangement to convert them into new goods and services. Innovation should, therefore, impregnate the entire enterprise for the creation and invention of competitive edge and relevancy in the market place. According to Amabile (1998) Innovation can take several forms:

- i. Innovation in processes, including changes and improvement to methods. These contribute to increases in productivity, which lowers cost and helps to increase demand.
- ii. Innovation in products or services. While progressive Innovation is predominant, radical innovation opens up new markets. These lead to increases in effective demand which encourages increases in investment and employment.
- iii. Innovation in management and work organization, and the exploitation of human resources, together with the capacity to anticipate techniques.

Innovation centres on people, culture, structure, process and technology. Innovation is the process through which the entrepreneur converts market opportunities into workable, profitable, and marketable ideas. Innovation is an application of something creative that has a significant impact on an organization, industry or society. Entrepreneurship is the continuing generation of Innovation in response to perceived opportunities in the business environment.

Types of Innovation

Kuratko, (2009) identified four basic types of innovation

- Invention
- Extension
- Duplication
- Synthesis

Invention: this is the creation of a new product service or process, often one that is novel or untried e.g. making an airplane.

Extension: this is the expansion of an already existing product, service or process already in existence such that the concept makes a different application of a current idea.

Duplication: this is the replication of an already existing product, service or process. The duplication effort however is not to be simply copied but aimed at adding the entrepreneur's own creative-touch to enhance or improve the concept and beat the competition.

Synthesis: this is the combination of already existing concepts and factors into a new formulation. This involves taking a number of ideas or items already invented and finding a way that they can form a new application.

Principles of Innovation

The major innovation principles according to Kuratko, (2009) are:

- i. **Action oriented:** innovators must always be active, searching for new ideas and opportunity or sources of innovation.
- ii. **Make the product, process or services simple and understandable:** people must readily understand how the innovation works.
- iii. **Make the product or services customer based:** innovation always must keep the customers in mind. The more the innovator has the end user in mind, the greater the chances the concept will be accepted and used.
- iv. **Start small:** innovators do not attempt project or development on a grandiose scale. They should begin small and then build and develop allowing for planned growth and expansion in the right manner and at the right time.
- v. **Aim high:** innovators do aim high for success by seeking a niche
- vi. **Try / test/ revise:** innovator should always follow the rule to try / test and revise. This helps work out any flaws in the product, process or service.
- vii. **Learn from failure:** innovation does not guarantee success. More importantly failure often gives rise to innovation.
- viii. **Follow a mile-stone schedule:** every innovator should follow a schedule that indicates mile-stone accomplishment. Although, the project may run ahead or behind schedule, it is still important to have a schedule in order to plan and evaluate the project.

Sources of Innovation

The following are sources of Innovation/entrepreneurial opportunities as identified by (Zimmer and Scarborough, 2013):

Trends: signal shift in the current paradigm of the major population. Trends need to

be observed in the society vis-à-vis technology, economy and government. The following are examples of such trends- ageing population, health and fitness; technology trends include mobile phone and internet advances. Economic trends include higher income and improved standard of living; government trend include increase regulation, petroleum prices and security issues.

- Unexpected occurrence: Events including natural disasters, act of terrorism, wars have given rise to innovating new product and services. These events unanticipated or planned often prove to be major innovative surprise to everyone
- Incongruities: this occur when a gap exist between expectation and reality
- Process needs: These occur when an answer is required. Venture capitalists often refer to these needs as "pains" that exist in the market place. The entrepreneur must recognize an innovative solution or a "pain killer".
- Industry and market structures: continuous shift in the market place are caused by development such as consumers attitude, advancement in technology and industry growth. Industry and market always undergo changes in structure, design and definition
- Demographic: this arises from changes in population, age, education, occupation, geographic location or similar factors. Demographic shifts are important and often provide due innovation/ entrepreneurial opportunities
- Changes in perception: these are changes that occur in peoples' interpretation of fact and concept. Perceptual changes are intangible but meaningful; perception can cause shift in ideas that are practicable in the market place
- New knowledge: these are the basis for the creation or development of company's brand new product or service. The inventions are knowledge based; they are product of new thinking, new methods and new knowledge, and such inventions often require the longest time period between initiation and market implementation because of the need for testing and modification.

Theories of Innovation

Different theories of innovation that have been put forward to prove the phenomenon of innovation as explain by (Zimmer and Scarborough, 2013):

Diffusion Theory of Innovation

According to diffusion theory of innovation, once innovation occurs, innovation may be spread from the innovator to other individuals and groups. However, this process has been proposed that the life cycle of innovations can be described using the 'S' curve or diffusion curve. The 'S' curve derives from an assumption that new products are likely to have 'product life' that is a start-up phase, a rapid increase in revenue and eventually decline.

Innovative entrepreneurs will typically be working on new innovations that will eventually replace older ones. Successive S-curve will come along to replace older ones and continue to drive upwards.

Different elements of diffusion theory of innovation are as follows (Anthony, 2005):

- The innovation
- Communication channels
- Time
- Social system

The Disruptive Innovation Model

Innovation often outstrips the capacity of the market place to assimilate it. Companies almost seek to solve the hardest problems and to do so at a faster rate than consumers can absorb, failing to recognize that the performance level customers can utilize is relatively flat. The characteristics of sustaining innovation and disruptive innovation are separate and distinct as seen in the table 1 (Anthony, 2005).

Table 1: Sustaining and Disruptive Innovation

Sustaining Innovations	Disruptive Innovations
Better	Different
Premium price	Low price
Next generation	Good enough for now
Leap forward	Leap down
Complicated	Simple

Sources: Anthony (2005)

In order to survive an entrepreneur must use the innovation model appropriately to where they are positioned in the market, therefore seven pillars of innovation were proposed by Anthony (2005) as very essential to all entrepreneurs who want to meet their goals and have competitive advantage. Table 2 presents seven pillars of Innovation as outlined by Anthony (2005).

Table 2: Seven Pillars of Innovation

Remove	Insert
Using one process for all innovations	Different resources and processes
Talking about the importance of innovation	Live and breadth innovation
Assuming business as usual works	Block corporate antibodies
Expecting projects to get big fast	Be patient for growth and impatient for profits
Looking for "right-stuff" managers	Find "Schools of Experience" staff
Assuming you have all the answers	Take an external perspective looking for "know-how" not "know-who".
Keeping a tight handle on doing things right	Embrace failure that allows for learning and adapting

Source: Anthony (2005).

Porter, (1985) argues that perpetual and pervasive innovation is the key to long-term sustainable success in the relentless competition for customers. To survive any competition, you must rapidly and repeatedly re-invest yourself. The road map to re-invention starts by applying the seven R's.

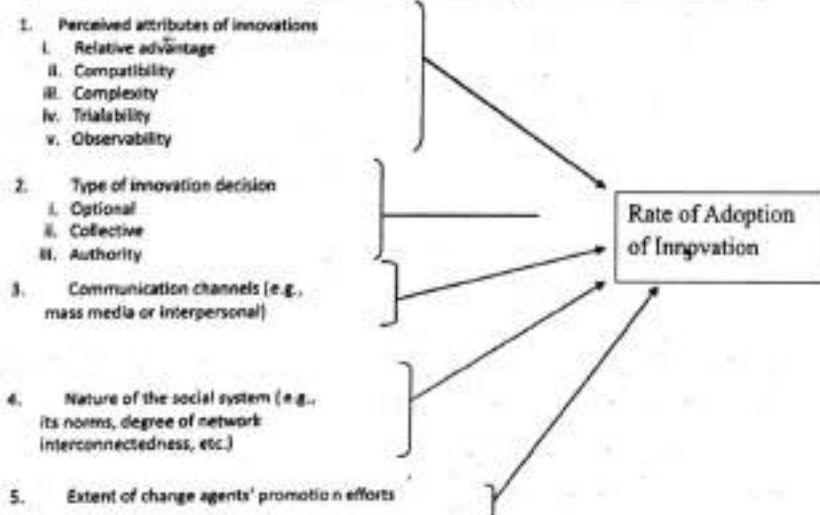
1. Rethink your underlying assumptions.
2. Reconfigure how you carry out work.
3. Re-sequence when work takes place.
4. Relocate where work is done to cut down on handoffs and delays.
5. Reduce the frequency of carrying out specific activities.
6. Reassign who does the work by asking if anyone else could achieve the same result more effectively and efficiently.
7. Retool the technology that supports getting the work done. Could new software and automated equipment transform our ways of working?

Rogers (1995) also proposed five variables which affect that adoption rate of any particular innovation as well as the rejection of the innovation and these he outlined as follows:

- i. Perceived attributes of innovations
- ii. Type of innovation decision
- iii. Communication channels
- iv. Nature of the social system
- v. Extent of change agents' promotion efforts

Fig 4 graphically presents the five variables which affect the adoption rate of any particular innovation as well as the possible rejection of such innovation.

Fig 4: Variables Determining the Rate of Adoption of Innovation



Source: Adapted from Rogers (1995).

Innovation Management Process

Management response to optimal technical change and innovation are crucial duties of an entrepreneur, failure to accomplish these may undermine the basis of his /her venture existence. There are four-stage processes which is relevant for managing and responding to technical change and innovation which is by its nature useful for enterprise existence, Hesseelbein and Cohen (1999). These are:

- Stage 1: This involves the scanning of the environment for relevant signal indicating opportunity for change.
- Stage 2: This involves deciding which of this signal to respond to, based on the strategic view of how the enterprise can best developed
- Stage 3: This involves acquiring resources to enable a firm respond to his signal and might be as a result of research in development.
- Stage: Implementing the project; developing both the technology and market in other to respond effectively.

Creativity and Innovation in Entrepreneurial Organization

The instigation of new development is the responsibility of the enterprises themselves, which, through experience, are aware of the difficulties created when undertaking innovative investments in a period of great uncertainty. Innovation calls for special entrepreneurial and management skills, the cooperation of a committed workforce, finance and a climate which will create the optimum overall conditions to encourage success ((Kuratko, 2009). Schumpeter (1934) believes that the concept of innovation, described as the use of an invention to create a new commercial product or service, is the key force in creating new demand and thus new wealth. Innovation creates new demand and entrepreneurs bring the innovations to the market. This destroys the existing markets and creates new ones, which will in turn be destroyed by even newer products or services. Schumpeter calls this process "creative destructions." According to Rogers, (1995), creativity consists of anticipation and commitment. Anticipation involves having a vision of something that will become important in the future before anybody else has it. Commitment is the belief that keeps one working to realize the vision despite doubt and discouragement. All innovation begins with creative ideas while creativity is the starting point for innovation. Creativity is however necessary but not sufficient condition for innovation. Innovation is the implantation of creative inspiration (Okpara, 2007). Growth and development cannot be sustained without additional innovations (usually in the product or services or in its marketing). With additional innovation, firms become "glamorous" introducing new products is seen as part of the process of innovation, which is always seen as the engine driving continued growth and development. According to

(Rogers, 1995), the winning performance of the entrepreneur and the organization focuses on:

- Competing on quality not prices
- Domination of a market niche
- Competing in an area of strength
- Having tight financial and operating controls
- Frequent product or services innovation (particularly important in manufacturing).

Conclusion

Successful entrepreneurs require an edge derived from some combination of a creative idea and a superior capacity for execution. The entrepreneur's creativity may involve an innovative product or a process that changes the existing order or an entrepreneur may have a unique insight about the course or consequence of an external change. Entrepreneurship is the vehicle that drives creativity and innovation. Innovation creates new demand and entrepreneurship brings the innovation to the market. Innovation is the successful development of competitive edge and as such, is the key to entrepreneurship. Creativity and Innovation are at the heart of the spirit of enterprise. It means striving to perform activities differently or to perform different activities to enable the entrepreneur deliver a unique mix of value. Thus the value of creativity and innovation is to provide a gateway for astute entrepreneurship, actively searching for opportunities to do new things or to do the existing things in extraordinary ways. Creativity and Innovation therefore, trigger and propel first-rate entrepreneurship in steering organization activities in whatever new directions, dictated by market conditions and customer preferences, thereby delighting the customers to the benefit of the stakeholders. Innovation also means anticipating the needs of the market, offering additional quality or services, organization efficiently, mastering details, and keeping cost under control. The current economic environment is a volatile one and creating a new environment demands renewed dynamism of approach and no doubt, creativity and innovation offers the only veritable way out.

REFERENCES

- Amabile, T.M. (1998), "How to kill Creativity" *Harvard Business Review*, 3(2).
- Anthony, S.D, Johnson, M.W, Sinefeld J.V & Altman E.J (2008), *The Innovator's Guide to Growth: Putting Disruptive Innovation to Work*, Harvard Business Press
- Buzan, T. (1974), *Use both sides of your brain*, New York, Dutton, Inc.
- Hesseelbein, .F. & Cohen, P. M. (1999) *Leader to Leader*, San Francisco: Drucker Foundation Leader books, Jossey-Bass.
- Isaksen, S. G., Dorval, K. B, & Treffinger, D. J. (1994), *Creative approaches to problem solving*, Kendall/Hunt Publishing Company.
- Kuratko, D.F. (2009), *Introduction to Entrepreneurship, International Student Edition (8th ed)*, South Western Cengage Learning 110-126
- McFadzean, E. (1998), The creativity continuum toward a classification of creative problem solving techniques, *Creativity and Innovation Management*, 7(3), pp. 131-139.
- Mihaly, C. (1996) *Creativity: Flow and the Psychology of Discovery and Invention* <http://psyclassics.com/book/csikszentmihalyi-creativity>
- Okpara, F. (2007), *The practise of Entrepreneurship*, Enugu, Nigeria: Precision Publisher Limited,
- Osborn, A. (1953), *Applied Imagination*, New York: Scribner.
- Porter, M. (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*. USA: Free Press.
- Forbes, R. (2014), *Creative Problem Solving: Out-of-the-box Solutions to Everyday Problems. Solutions Through Innovation*
- Rogers, E. M. (1995), *Diffusion of innovation (4th ed)*. New York: Free Press
- Schumpeter, J. (1934), *Depressions in Economics of the Recovery Program*, ed. D. Brown et al. New York: McGraw-Hill.
- Silvano, A. (1976), *Creativity, the Magic Synthesis*, New York: Basic Books, 1976.
- Thompson, P., Jones, M. Warhurst, C. (2007), From conception to consumption: creativity and the missing managerial link, *Journal of Organizational Behaviour*, 28 (5) p 625-640
- Wheatley, M.J. (1994), *Leadership and the New Science*, San Francisco, CA: Berrett-Koehler Publishers
- Williams, S. (1998), *The Heart of Entrepreneurship*. *Harvard Business Review*, March-April.
- Zimmerer W.T, Scarborough N.M & Wilson D (2013), *Essentials and Small Business Management 5th ed* 2013 New Jersey: Pearson Education Inc.