

Dynamics of Ideation, Creativity and Innovation For Entrepreneurship -- A Case Study of A Multinational Company

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Abstract: Ideation is the hub of innovation. In this century, the context of business has changed considerably because of globalization, Privatization, and liberalization. Business has become a global village with immense diversity of all nature. This has made ideation process very culture-bound locally, but with extensive global connectivity. Ideation and creativity are the germinating activities for any innovation system. Innovations are rapid and as fast as they change the corporate landscape. Ideation can be defined as the thought process involved in apprehending and expressing a new concept. Creativity on the other hand, is the outcome of the cognitive process of ideation undertaken by individuals and organizations. This paper explains ideation, creativity and innovation methods and process with different models. It helps to understand ideation and creativity process with the case studies of some of the multinational companies. This gives the entrepreneurs to understand the process and develop their business.

Keywords: Ideation, Creativity and Entrepreneurship

INTRODUCTION

Ideation is the creative process of generating, developing and communicating new ideas where an idea is understood as a basic element of thought that can be either visual, concrete or abstract. Creativity refers to originality of thought. It is a dream or thinking up of new ideas. It is however, more of an intrinsic outcome of the ideation process.

A business is uniquely "getting things done" institution. Creativity without action-oriented follow-through is a uniquely barren form of individual behavior. This is because (a) the creative man when tosses out ideas and does nothing to help them get implemented is shirking any responsibility for one of the prime requisites of the business, namely action and avoiding follow through. (Leviit,2002). Innovation was conceived as ideation. It was defined as a four stage process (a) generating ideas (b) refining ideas (c) selecting ideas and finally (d) a very minuscule component, implementation. Innovation was conceived as ideation or as creativity exercised by companies

Innovation = Ideas + process

Review of Literature

Creativity is the generation of new ideas by approaching problems or existing practices in innovative or imaginative ways. It is linked to innovation, which is the process of taking new ideas and turning into a market offering. (Bloomsbury,2002).

Creativity is that which we make or think something new, or a new combination of existing elements. This is the element of novelty or innovation. To be creative, the idea must also be useful or valuable'. (Bilton 2006). According to Oldham and Cummings(1996) Creativity can be defined as creative performance of products, ideas or procedures that satisfy two conditions (a)They should be novel or original ,and(b) They should be potentially relevant for, or useful to an organization.

In business, originality is not enough. To be creative, an idea must also be appropriate, useful and actionable. It must influence the way business gets done by improving a product or by opening up a new way to approach a process' (Amabile, 1998)

Ideation and Creativity are therefore bed rock of innovation. It is significant and key element to any innovation strategy .Innovation is all about generating ideas, connecting ideas, and driving solutions. Innovation has moved from conventional model of internal innovation within tightly walled centers of R&D, to a new model of the open innovation systems.

Objectives of the study

- To study the process of ideation, creativity and innovation.
- To study the different methods and process for innovation.

- To study the factors influencing Creativity and innovation

BACKGROUND OF THE STUDY

The context of innovation in the 21st century is very holistic and integrated. It runs through the entire business process from ideation to customer satisfaction. Therefore the ideation methods used can be classified

1. Inbound ideation
 - Internal innovation ideation
2. Outbound ideation
 - Voice of customer ideation
 - Open innovation systems ideation
 - Other miscellaneous ideation

INBOUND IDEATION

- The concept of internal innovation has been operative conventionally for a few decades in the 20th century. The tools available to carry out internal innovation and the scale and scope of these activities are varied and many.
- A brain storming or rapid ideation session with 10 or 20 people sharing ideas or in limited time frame to include thousands of participants from all over the world utilizing web-based ideation tools to share ideas in real time.
- Internal innovation ideation can be done effectively by leveraging the collective brain power of the entire company. In which every employee raises his potential and achieves a sense of purpose. The companies offer incentives for the best ideas generated, or reward to top contributors. Some of the key elements responsible to make ideation effective in an organization are (a) Proper framing of the challenge statement (b) High levels of engagement and contribution (c) Making rewards and recognition a part of ideation process (d) Publishing results of ideas accepted and implemented (e) an effective tool kit to analyse and interpret.

OUTBOUND IDEATION

In today's age, the market place is the final judge of business performance. The environment outside the organization plays a vital role in ideation and creativity. The following are the outbound ideation methods.

1. Voice of customers

The dynamics and vibrancy of the market provides cues for correct innovation. A good innovation design should emanate from a customer's needs and understanding of what empowers customer satisfaction.

(a) Ethnographic: This is the important method in innovation. Creation of product or service should be based on deep understanding of unarticulated user needs (Dorothy Leonard- Barton). This is a method of observation of a customer, for a longer period of time, by camping with them. This method provides greatest insights into customer behavior, accordingly products are modified to undergo innovation.

The different Observation techniques are

- Discrete observation
- Contextual interviews
- Empathy building

Discrete observation

In this method the, customers are observed without their knowledge and permission. This observation is very useful for consumer products and services, which are used in public. For example car manufacturing company.

Contextual interviews

Contextual interviews cover substantial background information on the customers, which may not be provided by mere observation. Asking and probing the customer leads to uncovering of details on aspects such as customer requirements, consumer perception, and product usage.

Empathy building

Empathy involves merging oneself with the customer. This helps the manufacturer to complete the customer study by being the customer itself. It is a process of identifying with the customer, which provides an overall perspective.

CUSTOMER VISIT TEAMS

Companies formulate cross- functional teams, representing various departments to visit the customers. Semi-structured interviews are used to solicit information and data from the customers.

CUSTOMER FOCUS GROUPS

Focus groups are used with the customers for need assessment, need gap and problem identification, issues to be addressed, and suggestions for improvement of the product. Focus of the group is very specific and defined, which helps in better understanding of the customer scenario and gives a very need based focused perspective.

LEAD USERS

Lead users are groups of customers or users that face more challenging requirements, than most of the current marketplace. Lead user needs can anticipate the general need of the market by months or years. Lead users are intelligent and imaginative customers with a futuristic perspective. Companies identify these lead users and work closely with them. They are selected from different market segments which includes current users and analogous users from other sectors also.

SCREENING THE EXSISTING USERS

The focus in this method is identifying customers who are more demanding than others i.e the extreme users. They are those users that are very extreme in their delicacies and treatment of the product in terms of usage, challenges for the product, and are experts in idea about the products.

CUSTOMER OR USER DESIGN

This method involves the use of information technology tools. Users are invited on a stimulated IT modeling set-up to design, modify and innovate the product. GE company provides customers with web-based tools for designing better plastic products.

CUSTOMER BRAINSTROMING

This method entails brain storming with selected customers on product innovation. . At various customer events, both at business-to-business (B2B) and business-to-customer (B2C) businesses, brainstorming sessions are undertaken with customers.

CUSTOMER ADVISORY PANEL

These panels or boards consist of experts and specialists who interact with customers on product development.

OPEN INNOVATION IDEATION

Open innovation are the methods of ideation where companies explore ideation outside their organization. Some of the open innovation methods are

1. External idea contest: Organizing events like ideation contests where participants from outside the organization are invited to submit ideas .
2. Partnering with vendors: In this method, company enters into collaboration with vendors in both the forward and backward integration process for idea generation.
3. Scanning small business and business start-ups: Small business and start-ups have great ideas as they are minutely rooted at the grass-root levels of the market. They are great reservoirs of ideas.
4. Accessing external know-how: The external scientific and technical community is also a great source of ideas. Online tools such as Ninesigma, Yet2.com are helpful in this process.
5. External product design: In this method, the company seeks not only ideas, but also complete product design from all business stakeholders.

OTHER MISCELLANEOUS IDEATION METHODS

There are three miscellaneous ideation methods

- a. **Peripheral vision:** This method needs a very rigorous exercise of studying the environment both formally and informally, identifying the gaps and links ,and then developing a vision.
- b. **Disruptive Technology:** Disruption of technologies open new vistas for innovation. It needs foresight, to tap into these new technologies to fill in the gap opened by disruption of the existing technology.
- c. **Patent Mapping:** Mapping and mining of existing patents is done in this method. This helps in understanding the location of competitive activity, which would indicate the potential areas for new product development.

MODELS FOR CREATIVE ENVIRONMENT

1. Peter Senge's model construct for creative environment
2. Khandwalla's model construct for creative environment

Peter Senge's model

In this model there are five components that foster creativity. They are

- i. Systems thinking
- ii. Personal mastery
- iii. Mental models
- iv. Shared vision and
- v. Team learning

Systems thinking: Systems thinking is an ideation process with a holistic and integrated approach. This holistic perspective is important for fostering an environment conducive to creativity. The process of ideation should be connected to every aspect of life, nature, and detail in its complete ambience. This kind of ideation will give an innovation, which would be efficient and effective.

Personal mastery: It is the mastery over the human dimensions of an organization. It is a special level of human skills proficiency. It is the energy and vibrancy of the people which leads to a full realization of their potential.

Mental models: They are the history of beliefs and systems of experiential learning, which organizations learn in their evolution. Mental models are cognitive as well as non-cognitive frameworks, which are framed in to understand the dynamics of an organization for making decisions and take actions.

Shared vision: A shared vision evolves from commitment and enrolment, which is self-instituted and self-driven.

Team learning: Intelligence of the team exceeds the intelligence of an individual. Collective capacity of individuals is called team work. Creativity emerges from interaction among team members which combines the capacity of thinking together. Team learning is essential to any creative environment for ideation to flourish.

Khandwalla's model for creative environment

Khandwalla has integrated the following components in his model on creative environment. They are Stimulation, nurturance, relaxation, Constructive feedback, Learning opportunities, Diverse view points, Freedom with accountability, Creators as role models, Facilities for experimentation, and norms of the organization.

Stimulation: The environment should incite new thinking. A path of continuous experimentation, mind stimulating ambience is necessary for good ideation.

Nurturance: Creativity is the product of nature and nurture. Intelligence has to be nurtured through dynamic process.

Relaxation: Khandwalla (1997) states: A relaxing environment that does not induce defensiveness and fearfulness by premature criticism or evaluation encourages creativity.

Constructive feedback: Feedback is an important loop for learning. It is a mechanism that helps to reinvent and grow. An environment in which there are opportunities for feedback and tough but constructive evaluation of ways of approaching complex problems and output of creative efforts encourage creativity.

Learning opportunities: Life is a continuous learning process. To be creative need to upgrade the skills according to the market needs. Continuous learning opportunities grow in a good environment.

Diverse View points: An environment that is rich in diversity of views and intellectual ferment encourages creativity. One that emphasizes uniformity and conformity dampens creativity. Freedom with accountability: A good environment provides freedom of thought, expression and action which augurs empowerment.

Creators as role of models: An organization should encourage and reward pioneers, innovators, creators and transformers of the status quo. It helps in making them to become role models of creativity.

Facilities for experimentation: The infrastructure for experimentation, both physical and non-physical should be provided by an organization.

Norms of organization: Norms and, which make an organization vibrant, stimulate creativity. The head of the organization should build norms and create culture that is open, collaborative and proactive and brings positive confrontation between individuals followed by consensus building.

Creative technology: There are many techniques for ideation and creativity. Some of the techniques for ideation are Brain storming, Attribute listing, Synaptic, Composing a question list.

A CASE STUDY ON TATA MOTORS FOR INNOVATION AND CREATION

Tata motors are well established Indian automobile company with a history of more than 60 years. With their wide range of product line, they keep the top position in the car industry in India. Also they are pioneer in the truck manufacturing and

bus manufacturing in the world. They had revenue of \$20bn in the last financial year 2009-10 with twenty five thousand employees working all around the world. With their strong leadership and innovation in the products they made good business all over the worlds. Tata Motors has operations in the UK, South Korea, Thailand and Spain. Tata concentrate more into economical buyers from the Indian society. Because of this reason their innovation strategies always point into cost reduction and economical cars. With a huge population above 1Bn, there is considerable amount of potential customers in this sector. The main factors affecting these customers are fuel efficiency and low-price of the car. Aiming this sector, Tata's most success innovative strategy was Tata Nano car with cost of 1Lakh Indian rupee (1300 GBP). This priced compared as double the price of a bike in Indian market.

SWOT analysis

Buy analysing the last Six years the innovation and acquisitions are the two key strengths of TATA motors. They made success with this strategy in their business and it opened so many doors for future expansion also. A SWOT analysis made on TATA is given below

Strength	Weakness
Acquisition strategy - eg :Jaguar(2008),Daewoo Motor's(2004)	Quality of cars ± Safety and features
Tie up with international producers ± Fiat, German suppliers	Weak in luxury car sector
International expansion with local leaders	Older designs
Pioneer in economical sector car	Poor brand name European Automotive industry
Tata Nano ± Cheapest car in the world	
Opportunities	Threats
Acquisition strategy - eg :Jaguar(2008),Daewoo Motor's(2004)	Introduction of international brand into Indian industry
Expanding TATA Nano into third world countries	Sustainable and safety issues
Utilizing Daewoo motors for truck industry	Cost reduction in one side and growing material price in the side will not work hand in hand in future

Entrepreneurial Mind - Ratan Tata

Ratan Tata, current chairman of TATA group is said to be the person behind success of TATA industries after 1990's. Also is the entrepreneur who brought revolution to the Indian automotive industry with his revolutionary idea. Under his leadership, in 1998 TATA motors launched 'indicia' India's first indigenously designed, developed, and manufactured passenger car, which eventually became the third-biggest seller (Anon., 2006; Kripalani, 2004).

He bought the idea of acquisition to the company by acquiring Korean company Daewoo motors and made companies famous in international market. After that move, TATA executed their plan to expand business to heavy vehicle sector. Next acquisitions were Jaguar and Land Rover in 2008 and made company expansion in UK and also expansion into luxury sector of cars. The best entrepreneurial act from Ratan Tata was TATA Nano- world's cheapest car. He used open innovation concept with collaboration of external knowledge and workforce. The three strategies are:

1. Open innovation
2. Innovation through acquisition ± Jaguar & Daewoo
3. Innovation for mass markets in emerging economies

1. Open innovation method Open Innovation coined by Chesbrough can be described as: 'combining internal and external ideas as well as internal and external paths to market to advance the development of new technologies'. This is a method of bringing a new process or product with a collective effort from internal external sources. The knowledge sharing is a key characteristic of this model. This collaboration with external source further create a additional market through then also a investment way from outside to the new thing. This pool of expertise and market will reduce the time of process and also reduce the cost of production. Major companies like CISCO, P&G, Siemens, and BP is successfully using this technique in their innovation management.

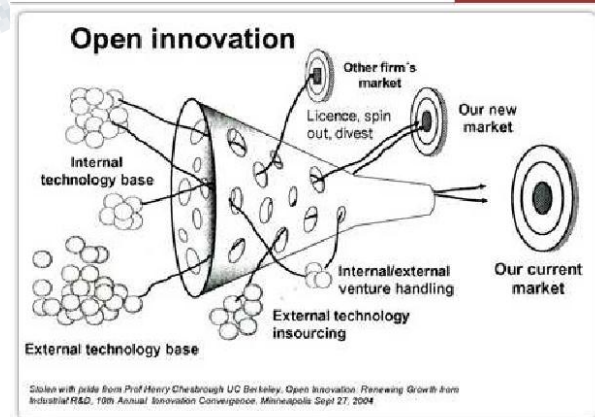


Fig1: Open innovation (Henry Chesbrough, 2004)

This open innovation is the success factor of Tata Nano. This made then delivers a car with basic features and cheap price. Tata Nano project made its innovation in all levels of engineering work. Engine, body, parts, design and marketing. They brought so many different sources under a

single umbrella to execute this project. The own R&D division worked hand in hand with German suppliers, Bosch, Local researchers and bring up with a car that satisfy the hidden market in India. Also the German engineering and suppliers enabled Tata to reduce the cost of Engine control unit for Nano. It's a small electronic control unit that controls all working of engine. The usage of more fibre and plastic instead of metals also made some difference in cost. This technology was also shared from an outside source. This collective work also increased potential market wave for this car as dream car for common people. In this case we can call the innovation model as open distribution model as well. Apart from the process and production the mobilized the third party to do their product marketing at and reach. Used local services into the customer interactive forum and enabled the service of the product in every corner of the country This create a long term relation with the customer and through that brand name and trust will increase among the customers. Since it's collaboration with third party in local areas, it will be a prestige and their business values for the local body to make the business a success. This mutual responsibility is the added benefit of open innovation in a broad sense. Three innovations in products and processes come together to support 'open distribution': increased modularity (both in products and processes) aggressive leveraging of existing third-party, often non-commercial, institutions in rural areas to more effectively reach target customers Creative use of information technology, carefully integrated with social institutions, to encourage use and deliver even greater value. (John Hagel and John Seely Brown, 2008) Even though open innovation has benefits like mobility of workforce, more ideas and innovation and opportunity for venture capital market it carries some issues as well. It might make issues when it comes to the patent of the product of method. Single it's a shared idea they can be possible declaration of third parties on the patent .But considering WIPO intellectual properties can be divided among two parties now. This can be a good Solution for the patent issue in this model.

2. Innovation for mass markets in emerging economies

a) Disruptive technologies

Disruptive technologies are simpler, cheaper and user friendly products that find out low-end profiles from main stream market. It will start the journey with low cost product in low end market or non-traditional market. After building a base it will slowly move to the mainstream market. This positional method is first used by Japanese automobile industry, and further flourished in third world countries and then came in to developed countries. (Hart and Christensen 2002) In our case of Tata motors use this same method and bought a technological innovation to into the low end auto

market in India. This will be expanding soon in global market after its success in India.

b) Architectural innovation: Two type of architectural innovation is possible in technological products. One is keeping the core technology untouched with empowering the component linked to it or add new component to it. The second method is to change the core concept of the product and make a pure innovation. Tata used the first methodology by linking the low cost innovations into a car concept. They used open innovation model in background to implement it.

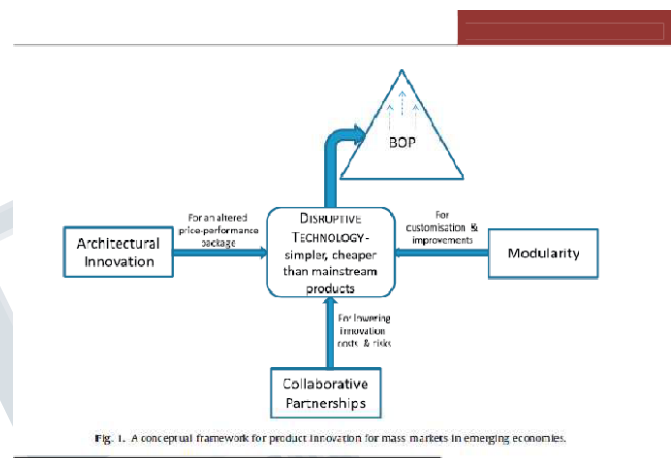


Fig. 1. A conceptual framework for product innovation for mass markets in emerging economies.

c) Modularity : Modularity involves a core product designed as a platform where the "architecture", "the interfaces" and "standards" remain constant to accommodate future generations of the product (Baldwin and Clark, 1997). Tata Nano introduced into the low end of the market with £1300 price with this idea. It contained the basic features and put slots for future expansion in future for upgrading the car. It already introduced higher version with air conditioning and airbags later.d) Collaborative partnerships and new product development Collaborative partnerships facilitate innovation by lowering costs, risks and uncertainties relating to development of new technologies or new markets (De Man and Duysters, 2005). Tata collaborated with international and local manufactures and companies. Almost 80% of the parts where outsourced to different companies in India itself and ECU was done by German company Bosch. For further cost reduction in the production TATA used a labour intensive assemble method rather than capital Intensive production. So these four factors can be adaptable to any innovation management strategy in a growing economy or a developing country and Duysters, 2005). Tata collaborated with international and local manufactures and companies. Almost 80% of the parts where outsourced to different companies in India itself and ECU was done by German company Bosch.

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3. Innovation through acquisition

Tata group always made their growth with acquisitions. In the steel business to car business they used this same strategy. In the case of TATA motors the expand the innovations by buying companies with lots of innovation. For example they bought Daewoo in 1998, a Korean company that made them to achieve a work force that enables to expand the business into heavy vehicle sector.

Similar in the case of Jaguar and land rover acquisition. Tata was very weak in the luxury model cars in their product line as we saw in the SWOT analysis. This gap is filled with rich brand acquisition. Tata started a strong research centre in UK, west midlands and also started a market for Land rover in India and Asian countries. ³Acquisitions are often efforts to "buy" innovation, folding in a so-called disruptive, or game-changing, technology developed by another firm. Or they represent attempts to bring in a staff known for its consistent and profitable creative output to the parental organization'. (Bloomberg Business week, Feb 2008). This statement proved in the case of jaguar and Tata. Overall sales rose 47% to \$5.65 billion and profits were \$141 million, compared to a loss of \$565 million a year earlier. JLR made a profit of 4.17 billion rupees (\$90 million), compared to a loss of 11.8 billion rupees a year earlier. (Bloomberg Business week, March 2010)

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