

A Systematic Review on Innovation Factors and Appreciative Intelligence

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ABSTRACT

Purpose: *Innovation is a critical phenomenon for an organization to be successful and need of the hour for an organization to stay ahead in the competition. Innovation is the result of 'out of the box thinking' in an organization and is essential in this competitive world for its survival. Appreciative Intelligence is the way forward to identify the opportunities and to focus on growth. The future foreseen through Appreciative Intelligence can be made successful with the Innovation factors. Although through Appreciative Intelligence the future is foreseen from the present, for economic success Innovation is needed. To beat the competition and to spur economic growth innovation is an essential phenomenon. Innovation is the result of multidimensional complex factors. These factors are both tangible and intangible. Thus it is essential to assess the synergy between the factors which have a significant influence on innovation and appreciative intelligence.*

Design/Methodology/Approach: *Developing a theoretical concept based on a voluminous literature review and analysis of the result of interaction with the professionals across 12 countries.*

Findings/Result: *Based on the developed theoretical conceptual model it is argued that both the factors which have a significant influence on innovation and the features of Appreciative Intelligence complement each other. Thus an organization that has both can envisage the opportunities or create the opportunities and realize the objectives by overcoming all the obstacles.*

Originality/Value: *A new conceptual model titled ApI² Factors (Appreciative Intelligence-Innovation Factors) which is a secret to everlasting success for an organization*

Paper Type: Conceptual Research

Keywords: Innovation Factors, Appreciative Intelligence, Tangible and Intangible Factors, ApI² Factors model, Appreciative Intelligence-Innovation Factors

1. INTRODUCTION :

It has been acknowledged that innovation is a catalyst for economic growth [1], [2], [3], [4]. Innovation is usually the consequence of the different type of thinking by motivated, creative people. This thinking differently may lead to the bringing out a new product, or change in the service or process that is carried out routinely. Technological reorganization and changes may be needed while managing innovation. Innovation is not just generating a new idea but also “bringing it to the market”. It is imperative that innovation should lead to adding value and should have a positive influence on society. According to James M. Utterback 1994 [5], the central theme of dynamics of innovation is the entry of a number of companies into a market and the succeeding exit of a number of competitors from the market. According to Sull 1999 [6] and Christensen and Overdorf 2000 [7], the companies which are dominant in the market generally are slow to react when disruptive innovation gives rise to new generation of products and these companies are complacent too. This lack of initiative towards innovation eventually may lead to the collapse of organizations.

Appreciative Intelligence is visualizing the future area of growth and achieving success. It is about identifying the positive aspects of a situation and making it reach its intended goal. Appreciative Intelligence has various components. In a scenario, the application of each of the components of Appreciative Intelligence is essential to attain the required objective. Basically, Appreciative Intelligence is the capability to perceive the mighty oak in the acorn.

Although business efficiency is a necessary part of the business it independently cannot support the growth. Revenue growth in an organization is the result of innovation which results into higher profitability. In the present day scenario, strategic planning is significantly influenced by the innovation capability of the organization.

In the meantime understanding the existing environment and taking into account the availability of resources of an organization to achieve the requisite goal is an important aspect of appreciative intelligence. Present generation's work environment is dynamic and the landscape of the organizations undergoing continuous change, hence the employees need to accept the challenges in a proactive manner instead of carrying out their jobs with passivity. Hence it is necessary to activate and engage the employees in the new change process in carrying out their activities [8]. The essence of Appreciative Intelligence is the ability to reframe reality and to value the positive and visualize the unfolding of the future. Thus the Innovation factors and Appreciative Intelligence go hand in hand in achieving the perceived objective.

2. RELATED WORKS :

2.1 Importance of innovation:

Innovation is the buzzword today. In the present competitive world, one cannot survive on past glory and past products. Smart organizations which can bring innovation to the market can become the giant killers. Innovation need not come from the R&D departments but can emanate from any department. In the present scenario, innovation is considered as open, and it is no more closed. In the open innovation paradigm, the input parameter may be contributed not just from within the organization but also from outside the organization.

Closed vs. Open innovation:

In the closed innovation paradigm, knowledge enhancement, product ideas, product development, marketing of new products all will traditionally happen within the boundary of the organization this is shown in Figure 1.

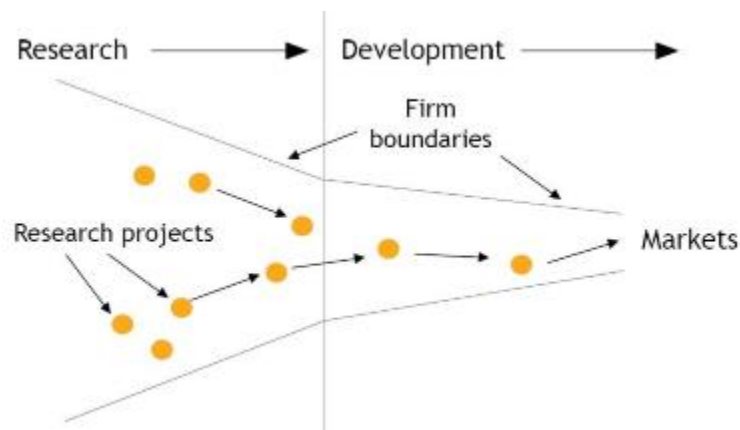


Fig. 1: Closed innovation paradigm [9]

However, various factors have changed the perception about the closed innovation, and the new paradigm of open innovation has taken shape because of following inevitable reasons:

Availability and mobility of highly qualified people have increased over the past few years. Because of this aspect, vast amounts of knowledge present even outside the R & D departments of large companies.

The employees gained knowledge is carried with them when they leave the organizations and join the other or start their firms. Movement of employees results in flowing of knowledge between different organizations.

Because of the abundant availability of Venture Capitals, the out of the box thinking has been supported. Thus the new technology and ideas are getting developed outside the larger organizations.

Even the larger organizations are showing a keen interest in licensing or having a tie-up with such smaller organizations which have come out with such great ideas or technologies. Even the suppliers who are part of the supply chain of an organization form an integral part in innovation processes. Organizations are also supporting the ideas or technologies which do not fit into their business strategy or in their core purview. To create customer value, the organizations have started looking outside the organizations to create an effective and efficient innovation process. As a result, organizations are actively pursuing the search for new ideas and technologies outside the organizations. Even the suppliers and competitors have involved in taking forward the innovation. Thus open innovation can be summarized as combining internal and external resources to support and develop new ideas and technologies and to market them. These aspects are shown in Figure 2 and Figure 3.

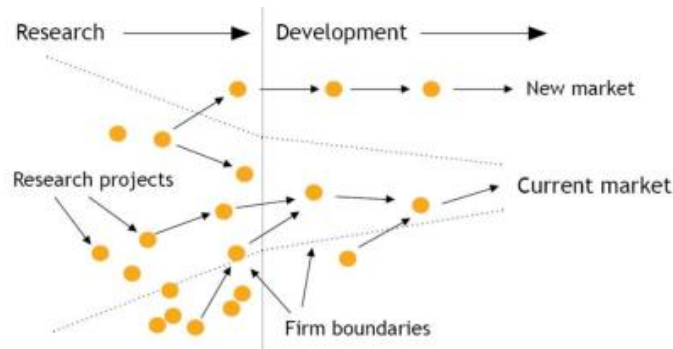


Fig. 2: Open innovation paradigm [9]

One noteworthy aspect of the open innovation model [9] is that noneconomic innovations are not in consideration. It describes new markets are the only potential place for the outsourcing of innovations which is shown in Figure 3. It could be concluded that even the noneconomic innovations can be considered and a new open innovation model can be developed.

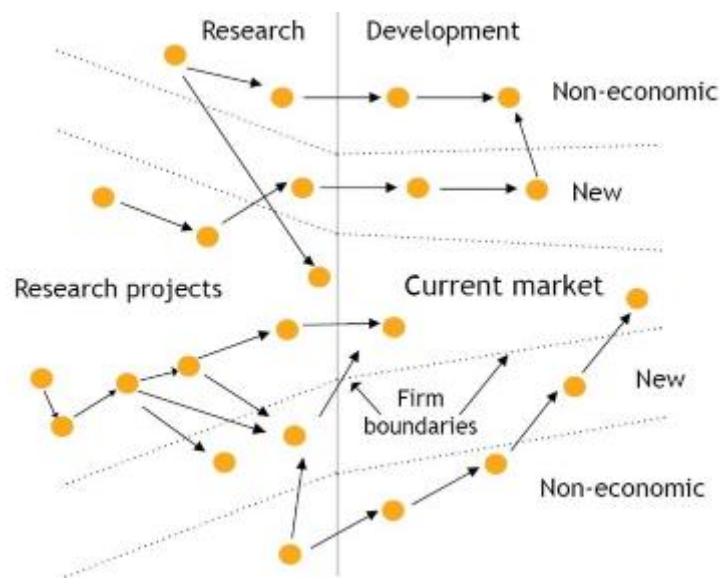


Fig. 3: Open innovation paradigm with noneconomic innovations [10]

The open innovation model implies that:

Organizations must become aware of the importance of open models and practices followed in the dynamics of innovation. All the good ideas generated need not be developed within the boundaries of an organization. Terms ideas, inventions, and innovations are not the same and they differ from each other. A mental image or preliminary thought of a new solution or device is known as an idea. An invention is that which already exists, but it is not applicable or can be used commercially. Innovation is something original which can be applied like a process, or product and which is useful to society

and commercially viable. Many different phases are required to be followed to take an idea from its basic shape to innovation, and it is often a long route.

2.2 Role of Appreciative Intelligence:

Appreciative Intelligence is the capability to see the great potential of any circumstances—"the oak within the acorn"—and to realize it. Researchers through their extensive research have found that individuals with the characteristics of Appreciative Intelligence can reframe the circumstances, appreciate the positive, and can visualize the unfolding of the future from the present situation.

People with high Appreciative Intelligence are considered to be the part of the world around them or the environment in which they exist. They recognize associations between themselves and the environment around them. They can identify the cascading progression of their deeds affecting people and conditions around them. And the surroundings in turn drive their actions too [11].

Herbert Simon 1991 [12] has classified the process: The initial step of a realistic action is to focus on specific strategic characteristics of a given situation and to create a model of the situation giving thrust to the features that are given importance and in the focus of the attention. Instead of responding to the external environment or entity rational computation shall take place in the framework of a model created.

3. OBJECTIVES :

- (1) To identify the characteristics this leads to Innovation.
- (2) To identify the features of Appreciative Intelligence.
- (3) To develop a conceptual model showing the characteristics needed for successful innovative organizations.

4. METHODOLOGY :

This paper consists of developing a conceptual model to show the synergy between the influence of Innovation factors and Appreciative Intelligence in an organization for everlasting success through the in-depth review of various research papers.

5. INFLUENCING FACTORS ON INNOVATION :

Japanese success in technology and science is predominantly due to the creative attitude and high-level education of its citizens [13].

'Investment Theory', proposed by Sternberg and Lubart 1999 [14] suggests that the inclination to innovate requires a convergence of the following characteristics:

- Personality
- Styles of thinking
- Intellectual abilities
- Knowledge
- Motivation
- Environment

"Geneptore" and the "Componential" replica give the significant regions of research at the personal echelon, and the earlier scholarly articles can be segregated into the link between innovation and the following six features:

- (1) Personality
- (2) Knowledge
- (3) Cognitive ability
- (4) Behavioral abilities
- (5) Motivation
- (6) Emotion, mood states.

Many researchers have tried to find out any kind of dependency among intelligence and innovation capabilities but met with inconclusive findings. Most of the scholarly articles in this scope can be segregated into four categories, envisaging of innovation as given below:

- (i) General intelligence
- (ii) A tinge of geniuses
- (iii) Mental processes and cognitive abilities
- (iv) Intelligence judged by the observer

Simon 1991 [12] suggests that the learning process in the organizations is through: the existing and newly employed members as the new members may bring in the knowledge previously unavailable in the organization. Innovative edge of an organization, to a significant extent determined by added up skills and knowledge of their employees [15].

Education contributes to building an individual's expertise, which may be presented through drawings, books, articles, presentations, etc. A good education is not the principal component to build an enhanced level of individual knowledge. Brusoni et al. 2007 [16] points out that the more an individual employee enhances his knowledge in the area of his specialization the organization gets benefited the most. So the employee knowledge must be enhanced over their functional areas.

Knowledge gained and accumulated through working experience is tacit as gaining it is not only due to education. This tacit knowledge is difficult to formalize or communicate [17], [18]. The advantage of tacit knowledge of an individual is proved during the actions and activities undertaken during the working on a specific task or the project. Practical knowledge is the basic foundation of tacit knowledge. In the view of Nonaka 1994 [18] and Nonaka and Takeuchi 1995 [17], the dominant forces to motivate individuals to enhance their knowledge are their intention and freedom in the given environment.

In total, individuals are the starting point and significant source contributing to organizational knowledge and learning.

Following are the major issues contributing to learning and innovation in the organizations:

- Education and training
- Communications among the department
- Creative thinking
- Platform to showcase the expertise
- Intentions and freedoms
- Intensity of efforts

Thus it is essential for the organizations to have a suitable positive working environment for all the above processes to take place. Fiona Patterson et al. 2000 [19], emphasize individual initiative, social proficiency, and proactivity as the contributors to the employee behaviours associated with innovation. Research also has indicated that the extrinsic rewards given below along with the most needed intrinsic motivation may contribute to innovation [20], [21]:

- Bonuses
- Pay Increases
- Recognition
- Awards
- Promotions

According to Gustavo Manso 2011 [22], since innovation is something that is not tested earlier may likely to fail and to relate failure to the pay hikes or having a negative impact on the career growth will hamper the innovative environment in the organization. Instead, a robust tolerant approach towards the failure and some reward for having the intention to contribute towards the innovation will substantially help the organizations in the long term success.

According to Fiona Patterson et al. 2009 [23], such organizations are most active at bringing about innovation which positively promotes and compensates the individual or the team responsible for innovation. Even the organizations that devote time to brainstorming sessions for showcasing the creative ideas of their employees are also successful in promoting innovation.

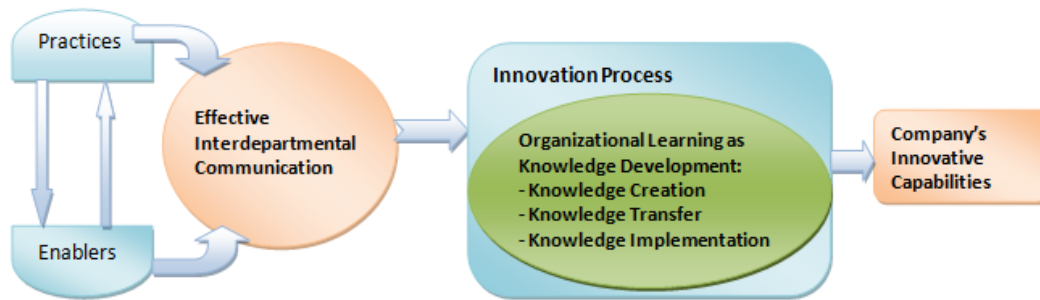


Fig. 4: Conceptual framework for interdepartmental communication [24]

Organizations need to learn to be successful in innovations, and there are different ways by which the organization can learn which are listed below [25]:

- Through R & D
- Through ideas acquired from outside the organization
- Through interacting with suppliers, partners, and customers
- Through reviewing the documentation of the previous projects

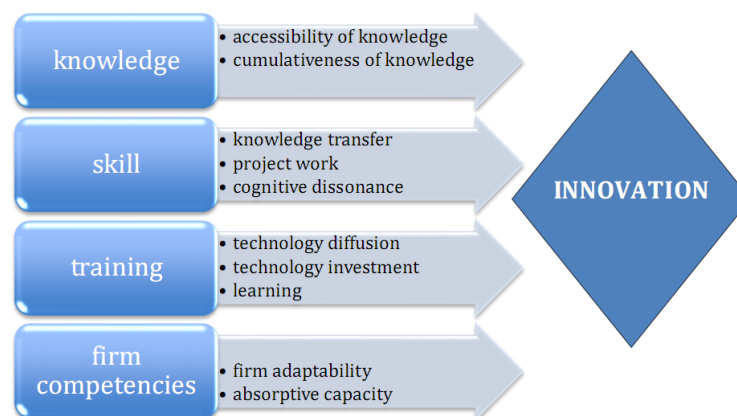


Fig. 5: A model of interlinkages between components of skill systems and innovation [26]. A summary of the characteristics which may have a positive influence on innovation are provided in Figure 6:

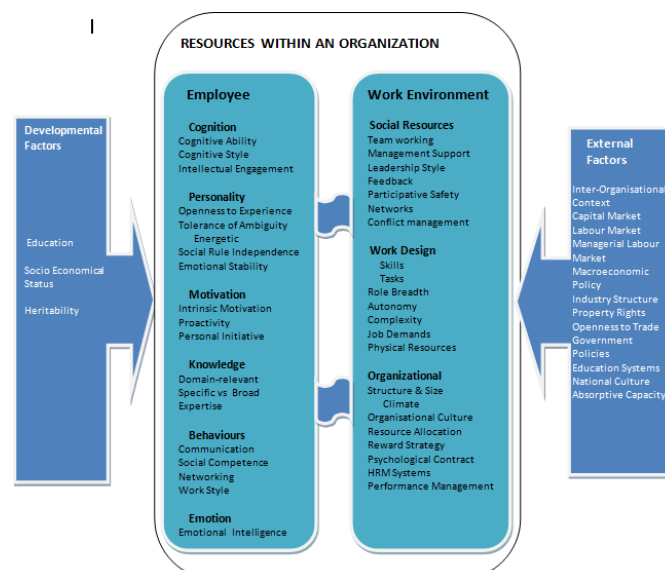


Fig. 6: Innovation in organization: People pertinent resources for innovation in organizations [23]. Innovation is not simple but is a complex and multidimensional activity so cannot be measured with a single indicator or it cannot be measured directly [27].

- If innovation is to be successful, many factors which are complement each other are essential and not just the technology, but it is much more than that.
- Innovation's complex multiplicity feature cannot be captured adequately with a single measurement.
- Demand in the market determines the rate of investment and bringing out new products. So this is also important in driving innovation.

It is understood that both tangible and intangible factors are responsible for innovation but since intangible assets are not present in the physical format measuring their influence is not a straightforward task. So the indirect measurement option is used. Substitution methods are formulated, and they are characterized.

6. CHARACTERISTICS OF APPRECIATIVE INTELLIGENCE AND ITS IMPACT :

In-depth study of the literature review has revealed that persons with Appreciative Intelligence generally have four consistent qualities:

- (1) Persistence
- (2) Confidence that everyone's activities are important
- (3) Tolerance for uncertainty
- (4) Resilience to the situations

Realizing the unfolding of the future from the present scenario is a critical trait of people who have high Appreciative Intelligence. They have the capability to identify the role of external aspects or the environment in the process. Their ability to visualize the connection between the future to the potential of the present situation is an important aspect. They also have the capability to recognize positive aspects of the current scenario and to apply them to accomplish the objectives.

Persons with a high degree of Appreciative Intelligence can see through and create a series of small steps which can be executed one after the other, thus driving the positive change in the environment and individuals which results in realizing the goals.

Persons with Appreciative Intelligence have the ability to restate the current condition and to attain a positive future condition which can be reached through existing concepts, tools, and resources.

In the concept of Appreciative Intelligence creative, action-oriented, and innovative success are accomplished over a period of time by linking the present environment to the future.

Envisaging the future from the present is the most important challenge in Appreciative Intelligence. It is the ability to assess the unfolding of the future depending on the present environment. One of the key components is identifying the trends and needs in the market and ways to full fill them. The judgment of the professional diasporas and opinion creators has the positive value to perceive an idea to be brilliant and get it to the successful phase.

Persons who want to make an idea successful will have the clear-cut pulse of the present environment and have the imagination of the future; this feature is the most important one in Appreciative Intelligence. These persons with Appreciative Intelligence not just respond to the environment but also research the best ways to make the maximum out of it. They use their imagination and creativity to perceive the future.

An organization may have some kind of environment within it and it may not be the same as the environment outside of it. But the organization should try to look at the environment outside it and build Appreciative Intelligence within its structure.

Let us consider an example where engineers from Sony and JVC looked at the Ampex- produced tape recorders which were costing \$50,000/- in the late 1950s and imagined such tape recorders being produced and sold at \$500. Thus in this case it is not the market that is calling for an invention first instead inventions and inventors are visualizing the changing market demand and taking proper actions [28].

Thus there are numerous examples of products such as microwave ovens, instant cameras, cellular telephones, compact disc players, fax machines, the BlackBerry, and the Internet where the product was imagined, produced, and introduced to the market and the market was created. The need for these products was not solely predicted through market research.

"Anticipatory reality" [29] is the process of seeing through the future as if it has already taken place. This helps in changing the perception and thinking from what is not possible to what is realizable. Thus the important aspect is visualizing various possibilities, planning, and implementing actions.

By looking at their surroundings the persons with Appreciative Intelligence can [11]:

- Construct
- Rearrange
- Single-out
- Visualize
- Demolish many myths
- Look at the positive features, etc.

The principal ingredient of Appreciative Intelligence is imagination. Innovation can result from applying imagination to awareness and knowledge.

While looking at something in one place may result in the application of it in some other place. It may happen while watching a TV program, game, discussion, or at the workplace. It may so happen that an idea may be generated and implemented in some other domain along with finding a solution to the present issue. This will happen because of the imagination of the person. The present-day technology revolution is the result of envisioning needs and bringing them to reality.

7. INFLUENCE OF FACTORS ON INNOVATION-CONCEPTUAL MODEL :

Research carried out by [30] has identified the following factors to have a significant influence on innovation. An organization having characteristics given in Table 1 in its structure, management and employees are ought to have high innovation capability. A conceptual model showing the influence of various factors on innovation is shown in Fig. 7.

Table 1: Innovation Factors

Sl. No.	Factors	Sl. No.	Factors
1	Freedom to experiment	2	Team Spirit
3	Working with innovators	4	Support to R & D
5	Opportunity	6	Attitude
7	Technological Change	8	Free Environment
9	Experience	10	Regular Training
11	Organizational Structure	12	Competition
13	Incentive given	14	Interdepartmental Communication

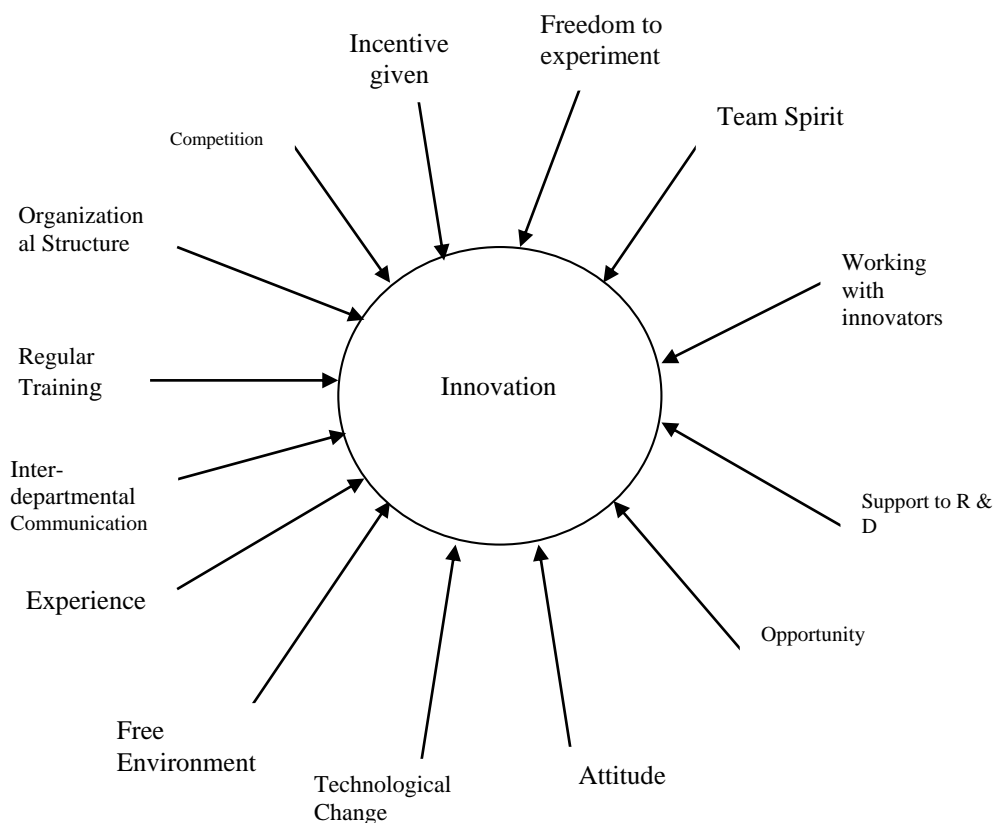


Fig. 7: Factors influencing innovation in an organization: A Conceptual Model

8. CHARACTERISTICS OF APPRECIATIVE INTELLIGENCE-CONCEPTUAL MODEL :

Research carried out by various researchers discussed in this paper has identified the characteristics of Appreciative Intelligence which have significant influence on the successful working of an organization. These characteristics are given in Table 2 and are depicted by a conceptual model (Fig. 8).

Table 2: Characteristics of Appreciative Influence

Sl. No.	Characteristics	Sl. No.	Characteristics
1	Persistence	2	Confidence that everyone's activities are important
3	Creativity	4	Ability to look at the positive features
5	Ability to demolish many myths	6	Knowledge about environment
7	Imagination	8	Ability to rearrange steps
9	Resilience to the situations	10	Tolerance for uncertainty

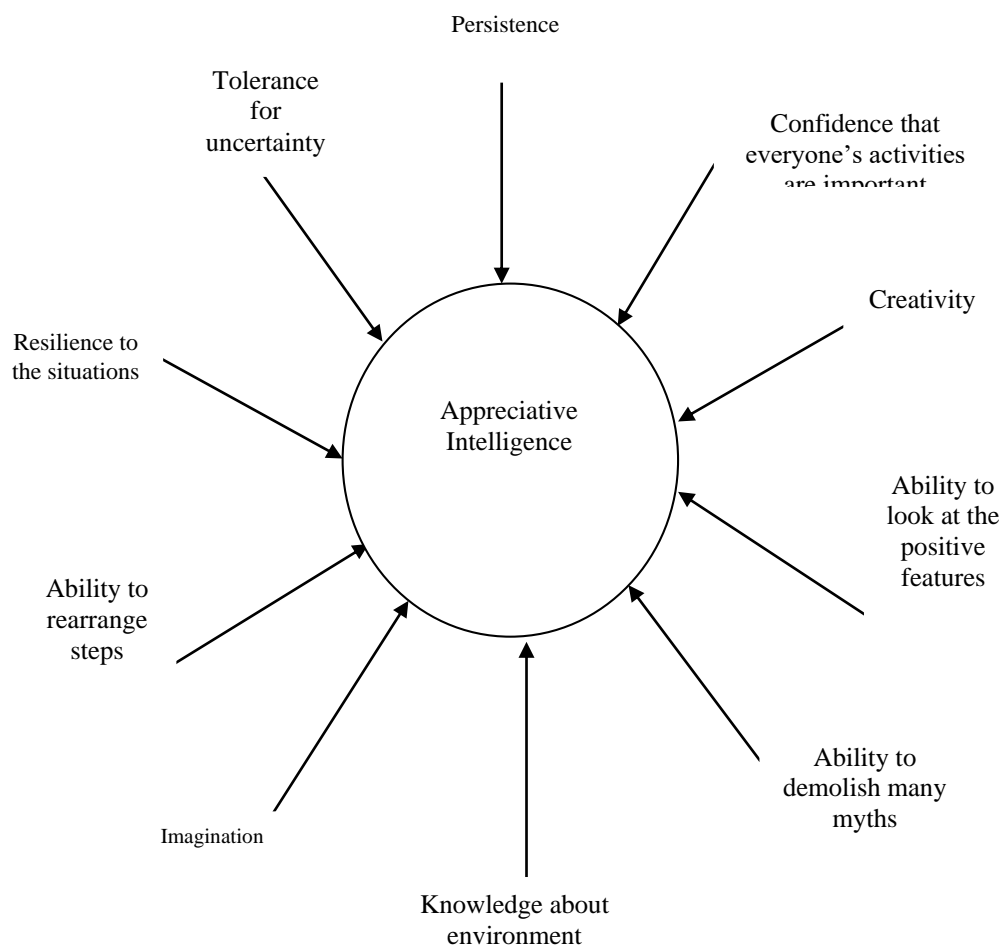


Fig. 8: Characteristics of Appreciative Intelligence: A Conceptual Model

Table 3: Scholarly contribution in the field of Innovation factors and Appreciative Intelligence

Sl. No.	Contribution	Reference
1	Thinking differently is need of the hour for the successful existing of the organization.	Romer, P. M. (1990). [1]
2	Result of out-of-the-box thinking leads to innovation.	Grossman, G. M., & Helpman, E. (1993). [2]
3	Patents give exclusive right to the organization to develop innovative products and services.	Bloom, N., & Van Reenen, J. (2002). [3]

4	Thinking differently may leads to bringing out a new product, change in the service or process which is carried out routinely.	Bosworth, B., & Collins, S. M. (2003). [4]
5	Dynamics of innovation is the entry of a number of companies into a market and the succeeding exit of number competitors from the market.	Utterback, J. M. (1994). [5]
6	Larger companies are slow to react for the needs so they have chances of loosing their edge.	Sull, D. N. (2005). [6]
7	Lack of initiative towards innovation eventually may lead to the collapse of organizations.	Christensen, C. M., & Overdorf, M. (2000). [7]
8	It is necessary to activate and engage the employees in the new change process in carrying out their activities.	Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). [8]
9	"Open innovation," which strategically leverages internal and external resources.	Chesbrough, H. W. (2003). [9]
10	Open innovation paradigm can be used with noneconomic innovations.	Inkinen, S., & Kaivooja, J. (2009). [10]
11	Surrounding environment drives ones action which is an important aspect of Appreciative Intelligence.	Thatchenkery, T. (2009). [11]
12	Realistic action is needed to focus on specific strategic characteristics of a given situation.	Simon, H. A. (1991). [12]
13	Taking actions based on the market demand is essential to be successful.	Dauda, Y. A. (2010). [13]
14	Inclination to innovate depends mostly on personal characteristics of a person.	Sternberg, R. J., & Lubart, T. I. (1999). [14]
15	Knowledge level and skills of the employees plays an important role in innovative organizations.	Winter, S. G., & Nelson, R. R. (1982). [15]
16	Employee knowledge must be enhanced over their functional areas.	Acha, V., Brusoni, S., & Prencipe, A. (2007). [16]
17	Tacit knowledge is acquired through the working experience and important in the successful functioning of the organization.	Nonaka, I., Ikujiro, N., & Takeuchi, H. (1995). [17]
18	Tacit knowledge is difficult to formulate and communicate.	Nonaka, I., Byosiore, P., Borucki, C. C., & Konno, N. (1994). [18]
19	Individual initiative, social proficiency, and proactivity are the contributors for innovation.	Patterson, F., Ferguson, E., Lane, P., Farrell, K., Martlew, J., & Wells, A. (2000). [19]
20	Rewarding the performers and flexibility in the working environment leads to innovation.	Abbey, A., & Dickson, J. W. (1983). [20]
21	Competition motivates creative thinking which results into innovation.	Eisenberg, J., & Thompson, W. F. (2011). [21]
22	Failed innovations also be supported to motivate the continuation of the efforts.	Manso, G. (2011). [22]
23	Compensating individuals or team is an important aspect in taking forward the efforts in innovation.	Patterson, F., Kerrin, M., & Gatto-Roissard, G. (2009). [23]
24	Interdepartmental Communication plays an important role in innovation.	Kovalenko, A. (2009). [24]
25	Organizations need to learn to be successful in innovations and there are various ways to do it from within and from outside.	Bessant, J., & Tidd, J. (2007). [25]
26	There are linkages between the skill set and innovation. There are dependent on each other.	Jones, B., & Grimshaw, D. (2012). [26]
27	Innovation is complex and multidimensional activity.	Milbergs, E. (2004). [27]
28	Management Practices play an important role in a successful business.	Prahalad, C. K. (1995) [28]
29	Organizations are product of human mind and interactions.	David L. Cooperrider (1990). [29]
30	Various groups of characteristics may have significant influence on innovation.	Vishwanath Pai, M., Mayya, S., & Joshi, H. G. (2019). [30]

9. CONCEPTUAL *ApI²*FACTORS MODEL FOR SUCCESSFUL INNOVATION :

There are various factors that influence innovation. Through the literature review and by the analysis of the result of interaction with the professionals from 12 countries,[30] it is also understood that Innovation happens because of various complex, nonlinear, multi- dimensional parameters. Both tangible and intangible factors have considerable influence on innovation. Both internal and external factors are responsible for innovation. Amount of influence of various factors on innovation also vary depending on their characteristics.

By surveying through various literatures it is understood that Appreciative Intelligence has different characteristics. An organization that has inbuilt Appreciative Intelligence in it can visualize the opportunities and work to realize them. Persons with Appreciative intelligence are able to understand the environment and take proper decisions. While realizing the objectives they may go through various obstacles but they should have the resilience to overcome all the difficulties. Thus great support from the organization is needed.

An organization must have the combination of Innovation factors and the tinge of Appreciative Intelligence built in it for the everlasting success. The conceptual model is given in Figure 9 and titled as *ApI²Factors* model.

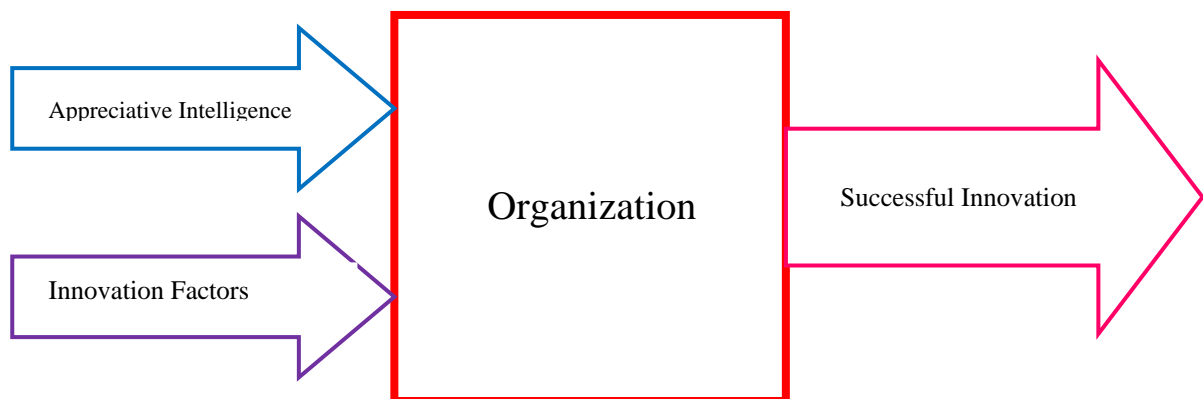


Fig. 9: Influence of Innovation Factors & Appreciative Intelligence on Innovation in an organization: A Conceptual Model titled as *ApI²Factors* (*Appreciative Intelligence-Innovation Factors*)

10. CONCLUSION & FUTURE SCOPE :

10.1 Conclusion:

Through the literature review, it is understood that innovation and appreciative intelligence characteristics are the essence of a successful organization. Innovation is the backbone to beat the competition and a catalyst to growth & revenue. In fact, it is the survival factor to stay relevant. Complacency has led many corporations to the brink of collapse. An invention is known to the inventor only if it is not used for the benefit of society.

It is concluded that both the factors which have a significant influence on innovation and the features of Appreciative Intelligence have synergy in each of them. Thus an organization that has both can envisage the opportunities or create the opportunities and realize the objectives by overcoming all the obstacles.

10.2 Future Scope:

It is noted that the capability of innovation and Appreciative Intelligence vary in different organizations. It is important to understand the quantum of each of the capabilities in an organization to fine-tune the result. In continuation of this research, some light may be thrown to identify the tools which can measure the quantum of influence of these various factors and characteristics on innovation.

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