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CREATIVITY AND INNOVATION GROUPS (CIG) MODEL OF CREATIVITY AND INNOVATION IN THE MODERN ORGANIZATIONS

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ABSTRACT

Along with the daily development of science and technology, the need for easy and faster access with better results becomes more prominent for the mankind. Accordingly, the most basic and the most principled way to achieve this goal is to consider the creativity and innovation. According to the historical background, it can be realized that creativity and innovation is highly accessible if the new methods are adopted, and attention be paid to the intra organizational, creative individuals, creative management, the community infrastructures, and the use of effective new models such as CIG. This article tries to study and analyze CIG Model, and to compare it to different models of creativity in order to provide some guidelines for producing creative individuals.

Keywords: 1- creativity, 2- Innovation, 3- organizational development, 4- idea, 5- CIG Model of creativity and Innovation

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INTRODUCTION

No forecasting and deep thought is needed to estimate that even more than past in the Future, innovation and expert creativity will be the main criteria for the distinction between the successful individuals and enterprises and the unsuccessful individuals and enterprises. Along with the daily advancements of knowledge and technology, and the vast stream information, nowadays our society is in need of training the skills with which the society can keep up with the pace of the science and technology development. The objective should kept at training individuals who can tackle the problems with open minds, and try to solve their own problems, and the problems of the organization. It must be in such a way that the individuals can establish good relationships with each other; and, by using collective knowledge, and by producing new thoughts redeem from the problems. Nowadays, our people are in need of training creativity to advance toward a happy society by creating new thoughts [2]. The increasing information stream has caused every individual to be exclusively in possession of a kind of knowledge and experience, while the other have not been fortunate to adopt them; therefore, the streaming information of science, knowledge, and experiences among the individuals is a key of success in the modern world. No one is able to estimate how much real and unreal information an individual has stored in the corners of his mind. This information will stream when a strong incentive triggers them out of the mind. In this step, the humans are sensitive to the fate of each other, and try for the development of each other; finally, this causes a stream of knowledge, science, and experience among them; which, this will result in providing creativity and innovation [1].

One of the effective factors of creativity in the society, is platting a context among the individuals to create a culture in which all try to promote each other, and by influencing each other, they can help the development of the society. One of the necessary requirements of emerging new thoughts is the tranquility of mind, and a different view point. For this reason, it is necessary for the individuals to provide such a condition in the society in which the mind can think and develop, and create new thoughts of providing the conditions of in the society. The conditions of the formation of a tranquil environment in the society can be provided by increasing ethical investment, while the decrease of ethical investments in the society

provides the backgrounds for discrete social relations. When the social ties are loosened, the conditions for the emergence of creativity in the society become more difficult because there will be no opportunity to think [8].

This article aims to study and analyze CIG Model, and to compare it to the different innovation models, and to provide some guidelines for training creative individuals. Therefore, different parts of the article will be organized as the following:

In section two, a quick overview of related works on creativity and innovation in Iran and other countries of the world will be provided. In section three, the theoretical foundations of the effective factors on creativity and innovation, and the personality traits of the creative individuals will be discussed in details. In section four, some of the most important innovation and creativity models by scholars are described. In section five, the intended CIG Model, its dimensions and variables are introduced. In the final section, we will discuss the results of the study.

2- Review of the related work on creativity and innovation in Iran and other countries of the world

"Creatology" is a term to refer to a specialized interdisciplinary and multidisciplinary scientific filed of study the processes and phenomena of creativity and innovation, which was coined by the Iranian scholar Dr.Seyed Mehdi Golestan Hashemi. The term of "creatology" structurally is the same as terms such as "biology", "Geology", "sociology", "Psychology" and the like [5]. The studies on creativity and innovation go back as far as the beginnings of the 20th century. On the second half of the 20th century, this was the area of active research. Lots of studies by different scholars from several scientific disciplines and origins in different countries were carried out. Some of the researchers and experts include Gilfillan, Osborn, Torrens, Gilford, Altschowler, Magarey Beck, etc.. But, the independent comprehensive scientific discipline called "creatology" was first founded and pioneered by Dr. Seyed Mehdi Golestan Hashemi on 1999, after his excessive and extensive studies and researches. After that, this was gradually introduced to the scientific circles in Iron and other countries of the world. At present, this scientific discipline has been internationally recorded after him and Iran. In the related scientific circles and centers of the world countries, he is regarded as a brilliant and active scholar and experts in the scientific realm of creativity and innovation. While Dr.Seyed Mehdi Golestan Hashemi has founded, Pioneered and, developed the

specialized independent new interdisciplinary and multidisciplinary scientific "creatology" in the world, he also has recorded many innovations and has proposed many theories in this specialized scientific field. Also, he is pioneering in the introduction and developing some of the most important categories of creatology such as "creatology", "Bionic creatology", "Entrepreneurship" in Iran, and TRIZ (Theory of Creative Problem Solving). The Iranian Institute of Innovation and Technology which is working in the field of TRIZ is accessible at www.iiits.org, has been founded by professor Mohammad Hussein Namin, and has active specialized members in this field [11].

Creativity and innovation are developing in all enterprises and organizations of the developing countries. Since 1983, some consultants have tried to help the customer business in the service, production, and industrial fields in order to develop creative and innovative thinking in all working environments [2].

The world wide innovation movements have extensively tried to train the creative and innovative champion personnel in the organizations, and to make creativity and innovation groups. These programs began to work by appointing the director of the innovation and creativity groups offices in USA. In many countries emerged specialized associations of which programs were the reinforcement of creative thinking, problem solving, and holding annual meetings on creativity and innovation [13].

In the following, some examples of how an enterprise is trying to increase creativity and innovation in all organizational levels are presented.

✓ **England and Scotland**

Over previous 5 years, the consultative and creative thinking companies have developed in all points of the British Peninsula, in England and Scotland. The interests of its developing has been fortified before the official authorities. This increasing interest has gained more paces over the past 2 years.

✓ **France**

For this reason, in all societies this approach was endorsed that professional training of the creative groups via participating in the official projects, and giving aid funds for creative thinking, problem solving, and wide trainings as parts of the programs were employed as agendum.

✓ **Netherlands**

In the Netherlands, The Netherlands Training and consultation Organization for developing Creativity facilitates workshops of developing creativity in all walks of skills for the agricultural engineers who are ready to

enter into the industry. Each recruiting participant attends IT workshops for a few months. In this country, also, the concentrated clubs and associations members from all parts of the world are working for the development of creativity, and increasing movements of creative thinking in the professions and jobs have emerged.

✓ **South Africa**

Kobus Neethling's attempt was a real achievement in South Africa. The African Annual Conference on creativity was hold for 8 consecutive runs. Near Pretoria, successful conferences are hold, in which enterprises, industries, universities, and official organizations from all across South Africa, and some other African are participating. Every year, groups from Canada, USA, and Europe which attend many annual seminars and conferences, are invited to help this field in South Africa. The results are astonishing [10].

3- Theoretical Foundations

3-1- The Effect of Various Variables on the organizational Creativity and Innovation

3-1-1 the Effect of Structural Variables on Innovation

According to extensive studies, three statements can be proposed with respect to the structural variables First, the mechanical structures have a positive effect on innovation, be cause they have a low working specialty, they have less rules, and they have greater in concentration than the mechanism structures. Also, they increase the flexibility, adoptability, and the belief which facilitate the adoption of the innovations. Second, the ease of access to the plenty of resources is a key factor of the innovation. The plentitude of the resources enables the directors to expend for the innovation, and admit the failures. Finally, the interactions between different units while accelerating the reciprocate reaction in the organizational lines, help to eliminate the probable obstacles against the innovation. After all, none of these three variables can exist save that the senior managers are loyal to these three variables [4, 17].

3-1-2- The Effect of the Organizational culture on the Innovation

The innovative organizations have a similar culture. They encourage experimentation. They gift both the successes, and the failures. They use faults to acquire experience. An innovative culture is characterized as having the following 7 attributes [2]:

- Admittance of ambiguity
- Forbearance of the unpractical works
- Low external control

- Fortitude at risks
- Forbearance of collisions
- Putting more emphasis on the results, not the tools
- Putting emphasis on open system

The organization closely controls the environment, and reacts promptly to the changes as they happening.

3-1-3- The Effect of Human Resources variable on the Innovation

We realize from the human resources category that the innovative organizations actively encourage the training of their members and the development of their knowledge in an updated manner. They provide for their personnel high level job security in order to reduce the threat of firing for making mistakes, and to encourage the individuals to be changeable. When a new thought is developed, the pioneers of change will actively and eagerly work for the eminence of that thought, and they protect it; they over come the difficulties; and, they ensure that the innovation will be put in to practice [12].

3-2- Personality Traits of the creative and Innovative Individuals

Do the creative individuals have special personality traits? The studies show that although the creative individuals have IQs above the mean, but they are not necessarily geniuses. The creative individuals prefer freshness and originality. They are attracted by the complexity of the problems. They pass independent judgments. In addition, more than other individuals they are more able to finish, complete, and unify the diversity of thoughts. The creative individuals exceed other individuals to unify the linguistic thinking and the visual thinking, the logical thinking based on reality, and the illogical thinking yet fictional. The creative individuals are more motivated by their internal interests (such as a high tendency to know, and to explore the relationship between the phenomena) rather than the external factors (such as fame, wealth, or others confirmation). Psychologists have enumerated many attributes for the highly creative individuals. For example, Steenz has encountered that the creative individuals are in possession of the following parameters [7]:

- Mental and cognitive health: the ability to produce lots of ideas rapidly
- Perception flexibility: the ability to abandon a mental regulation and framework
- Initiative: the ability of making and proposing new suggestions
- The preference of complexity to simplicity: To pay attention and to consider the new issues of the complicated problems

- Independence and judgment: Being different from the colleagues in providing the new ideas and thoughts

The creative individuals are able to explore and analyze the new relationships between the phenomena. On the contrary, the non-creative individuals look at the phenomena with an ordinary view, while their minds capture nothing new. Added to the above mentioned attributes, the creative individuals (1) feel depressed at doing daily and repetitive activities, (2) different subjects capture their minds, and eagerly think about these subjects, (3) are not worried if they seem different from others, (4) are able to think about multiple subjects synchronously, (5) are eager to discuss their findings with others, (6) often do their works in different and even extraordinary ways, (7) pursue things, and if a new idea occurs in their minds, they can let go of it easily, (8) recognize the relationships between the phenomena more acutely and more rapidly, (9) their imagination is keener than others, (10) are not stubborn at changes, (11) are not threatened by taking reasonable risks, (12) are timely and know the value of time, (13) are interested in complicated subjects and activities, (14) are apt to adopt unusual thoughts, and have a high forbearance of ambiguity, (15) are always interested in making experiments and acquiring experiences, (16) are humorous and witty, (17) are directed in their motivations and interests, (18) are inquisitive to learning, and finally, have a considerable knowledge about life and its limits [6,3,11,9].

In general, the personality characteristics of the creative individuals can be studied in these categories: (1) knowledge, (2) intellectual abilities, (3) personality.

In the writings by Peter Dreker, the father of Management, some notions that include the unsaid dimensions and aspects of creative thinking are observable that are in line with the new proposed model, and more applicable than its theoretical discussions. Dreker, the father of Management, believes the there two main functions for management: innovation, and marketing. The innovation is usually expected from the organization knowledge workers, while the marketing is expected from the marketing workers, but the presence and importance of marketing in macro strategies of a company is one of the main duties of the organization senior managers. Systematic and purposeful innovation begins with the analysis of the opportunities, and is similar to intelligent and timely haunting of the opportunities.

The innovators pay attention to every thing. Sometimes, in things that apparently have no

relations to their business, they can find simple things by which they will surprise all. Customers' and expectations, values, and needs can mark a difference in the organization fate in the days ahead if they are considered from a viewpoint of both innovatory and marketing.

If we want to be creative individuals, it is necessary to pay attention to following points [1]:

1. The only difference between the creative and non-creative individuals is just a simple belief. The creative individuals believe that they are creative, while the non-creative individuals believe they are not creative. When you have a special identity, and a series of beliefs about you will be interested in searching for the necessary skills to show your identity and beliefs. This is why the individuals, who believe that they are creative, become creative.

2. The creative thinking is a kind of work. It is necessary to be seriously in love, and eager to indulge oneself in the process of creating new and different ideas. Then, you must resist all the adversities and difficulties. All creative geniuses work hardly with love, and produce unbelievable ideas which most of them are bad.

3. You should carefully explore the activities of creativity. While you are producing an idea to answer an issue, you are actually renewing the neurotransmitters which are related to gens which go on and off in the reaction to what happen in your brain.

4. The brain is not a computer; rather it is a dynamic system which completes its patterns, unlike a computer which calculates the patterns. The brain develops via the creative energy which is a result of the real or built experiences. The human combines the experiences, and in the exact significance of the word, creates them in this imagination. The human brain is not able to discriminate between the real experience, and the experience which has been clearly imagined in details.

5. While attempting to produce an idea, do not censure it, or do not evaluate that if this can happen in practice. Nothing can more quickly ruin an idea than self-censuring ideas. About all your ideas, before you choose them, think about their presentation as much as you can.

6. Do not stop at the first good idea; Always attempt to find better ideas. Do this as much as you can continue to know whether you have a better idea than other ideas.

7- It is expected that the specialists are negative oriented. As much as an individual becomes more specialized, his mindset becomes more limited and fixed on the

confirmation of what he believes to be absolute. Consequently, when they are confronted with new and different ideas, they will be more focused on the conformity: Does this idea or what I know be true conform?

8. Trust your instincts. Do not let you to be disappointed.

9. There is no such thing as failure. When you are attempting to do some thing, and you are not successful, you do not fail, rather you have learnt something that is not executable, or you can not make it execute.

10. You do not see the things as what they are, you see them as what you want to see. It is you that interpret your experiences, although all the experiences are neutral. They bear no significant meanings. You making them meaningful by the approach you choose to interpret them.

11. Always approach the problem on its own conditions. Never trust the first image or view of a problem, because it will lead to a biased thinking. Always see your problem from multiple aspects.

12. Learn to think extraordinarily. The creative geniuses do no think analytically and logically. The analytical thinkers, logical and ordinary, are special thinkers, i.e. they eliminate all the information that is not related to the problem. They are after ways to eliminate possibilities. The creative geniuses are whole thinkers, i.e. they explore ways that include every thing, including things that are quite different and irrelevant.

4- Introducing the most important innovation and creativity models

6-1- Innovation models

❖ **Technological Pressure Model**

Being the oldest model of organizational innovation, it has been formed more on the basis of "productivism" philosophy, i.e. "we can sell whatever we produce". Therefore, primarily an idea is created and changed in to a new product in the unit of Research and Development. Then, it is entered in to the production process. Next, marketing is done; and, finally the market need are known. As a result of this model 80% of the new products failed in the market, and only 20% of them were successful [14].

❖ **Market Uptake Model**

After the failure of "Technological pressure" Model which wanted to grow sales by the applying technological pressure, and the use of specialized knowledge of the Research and Development Unit, the producers realized the importance and the role of customers needs and wants, and they inclined to marketing and market researches. In other words, the market uptake model was founded on the basis of "market-orientation"

philosophy. So, they primarily recognized the market needs. After marketing, they designed and produced their products. The statistics show that 80% of the new successful products used this model. But, this model had its future problems and difficulties, such as when the marketing and market researches were over, on planning and production they realized many deficiencies and in compatibilities [9].

❖ **Integrated Model**

The market uptake model caused the formation of the integrated model. This model which is best executed on the bed of innovative organizations, and in which the entrepreneurs are central, is a model which integrates and adopts the market uptake model, and the technological model together with all features and capabilities of organization [16].

6-2- Creativity Process Models

The creativity process is one of the dimensions of creativity in the organization. The creativity process models are part of the creativity theory. In the following, the creativity processes bases on the intended models are historically studied.

❖ **Wallace's Model**

One of the first creativity process models has been proposed by Geraham Wallace. This model involves four stages [2]:

- Readiness: i.e. gathering the related data of the problem.
- Latency: refer to the unconscious activity on the problem.
- Illumination: i.e. the inspiration starts at the point where the idea or the problem solution is revealed.
- Proof: it is testing the ides from the illumination stage.

❖ **Rodman's Model**

On 1931, Rodman conducted a research by using a Questionnaire filled out by 710 inventors. It classified the creativity process into 7 stages [18]:

- Observation of a need or problem
- The analysis of the need
- Studying all the available information
- Formulizing all the problem solutions
- The analysis of the solutions
- Producing a new idea
- Studying and testing the solution and its completion

❖ **Osborn's Model**

Having conducted several studies in the field of creativity, Osborn regards that the creativity process involves 6 stages [4]:

- Problem definition: i.e. the identification of the problem, the selection of the problem, and directing the problem.

• Preparation: is the acquiring and analysis of the related data of the subject

• Early ideas

• Development of ideas

• Evaluation of ideas

• Idea selection

❖ **Ambles' Model**

On 1983, Ambles via determining the relationships between the creativity stages, and creativity ingredients proposed a functional model of creativity, which includes the following 5 stages [1]:

• Seeing the problem

• Readiness

• Ideas generation

• Proof

• Evaluation of the consequences

❖ **Polsk's Model**

On 1996, based on his researches on the creativity process models, proposed his own model termed the directed creativity cycle, which is a compilation of the previous models [15].

• Readiness

• Imagination

• Primarily, the organizational entrepreneurs explore the market and technological opportunities. Next, with respect to the market deficiencies, reactions, and protests, they recognize the market needs. From other side, they integrate the necessary tools and equipment with the market needs. Next, they adjust the financial facilities, managerial facilities, the organization size, and all other considerations to the above integrated needs.

5- Proposed CIG Model

To lead and achieve innovation as much as it can make the society to grow and sublime, we require activities and conditions, which based on the following model are generally classified in to 3 levels (Fig.1):

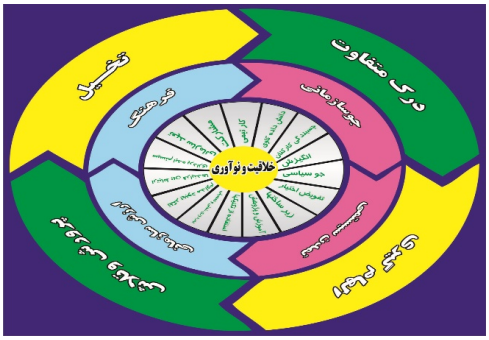

Fig.1 creativity and innovation model with a different CIG view point

➢**First level**

The first level focuses on the individual who should be in possession of the basic parameter in order to walk in the way of creativity and innovation:

1) Different understanding:

The creative individuals have a different understanding of the subjects, and the world. They look at a subject with multiple viewpoints; this results in their different understanding, and finding different solutions, and a cause for their creativity. We

make the world and its events meaningful, and we interpret them. If there is no different understanding of the world, no innovations will emerge. The creative individuals' different and sometimes extraordinary viewpoints of the subjects cause a different understanding of the world; this new and different view is the basis of creative individuals' innovation.

2) Imagination:

"Albert Einstein" has a famous speech: imagination is more important than knowledge. The knowledge is restricted to the things we already know and recognize, while the imagination encompasses the entire world. The creative individuals use their imagination in order to have new different ideas of various creativity subjects. The creative individual via his imagination imagines what is not already at the present and will produce it in the future.

3) Being Inspired:

It should be cautions that the problem solution and the acquisition of new ideas are not necessarily present inside the intended subject. Being inspired by other subjects, the nature, the surrounding world, and the thoughts and speeches of the others, who even can be non-specialists, we can look differently at subjects, and find new ideas, and good and creative solution for the present difficulties.

4) Education and work:

If we want to be innovative, we will need science and technology. We should mark us the more creative in all fields by education. The more our knowledge is increased, the more solutions and subjects we will employ. Also, practice makes our mind more creative. If we want to be creative individuals, we should make attempts. We practice; so, neither are we disappointed by failure; nor will we let go of the work by success; rather, we work hard.

➢ **Second level**

The second level focuses on the society in such a way that society should provide a condition in which the individual and the organization have the capability and possibility of creativity and innovation. The main areas which society must pay attention to, and put its shoulder on, in order to cultivate the increased creativity and innovation, can be described as:

1) Culture:

The culture works as the innovation platform. In case that the dominant culture dose not credit and honor the ideas, every innovation will be nipped in the bud. On such a case, the culture works similar to the body immune system which is dutiful to put down

every new-comer before it can harm the body. The culture is changeable, but this change takes place in a slow process.

2) Systematic civilization:

The concept of civilization has been adopted from civility and introduces a kind of urbanization order; by the systematic civilization, it is meant the order and stability in the system. Also the civilization, the system stability, and the organization cognizance are not less effective on the creativity and innovation. While the organizations are inclined to the civilization, and the overtime of the establishment of the organizations which have eliminated all crisis, and have been enriched, and are advancing to aid the society, and in some areas they are after changing the individuals' mentality and attitudes, the emergence of learning, and consequently the creativity and innovation can be very influential.

3) Organizational Climate:

With culture and systematic civilization, the positive organizational climate, employee and society satisfaction, providing adequate joyful and dynamic space besides providing mental welfare cause the creativity and innovation.

The researches show that the policies, the organizational programs, the financial status or the company shares, none of them can make the organization as an appropriate working environment, rather what makes the organization an ideal working place is the staff feels in the working place. The climate is the visible overview, and the culture is the invisible part of the organization, just the same as an iceberg floating in the water. The organizational climate, a group of characteristics which describe an organization, and distinguish it from other organizations, is constant over time, and influences the individuals' behaviors in the organization. The organizational climate can be put into simpler words: "the organizational climate is the staff cognizance of the environment which they are working in."French (1986) has stated that the organizational climate is a collection of quite permanent perceptions of organization staff about the characteristics of the organizational culture. These perceptions influence the individuals' feel, attitudes, and behaviors in the working place. West (1990) believed that in the working groups the organizational climate and desirable working climate will cause the emergence of exquisite and novel ideas and values. Harley and Heart (1998) in their study asserted that there was a positive relationship between the organizational climate, learning and development, participation in organizational decision-

making, and management support of innovation. Fleming (2002) regarded the organizational climate as on overview of the cultural characteristics, which is resulted from the staff perceptions and attitudes. Wang and Ahmad (2004) believe that in the organizations with a coherent and supportive organizational climate of organizational culture, all the organizational members are loyal and obliged to new initiatives, and they review the present and current initiatives in the organization [9].

4) Organizational value:

On evaluating the performance of successful organizations, their serious efforts on ethical concepts under the title organizational values are very evident. Traces of this approach have been recognized as one of the main duties of the managers and leaders via developing the values, and ethical system of the organization in the process of planning and organization strategic management.

Different definitions of the values and the organizational values: There are several definitions from different viewpoints. Some of them are:

Value: the current belief that causes a behavioral style be preferred to its oppositional reverse behavioral style by both the individuals, and the society [2].

Value are the beliefs and concepts which due to their special stand and status are not negotiable and reconciliatory.

Values often are supposed to be those ideas which the human have about good and evil, desirable and undesirable.

Organizational values refer to those values that direct the staff and organizational managers' behavior, deeds, and thoughts, and influence them [6].

➢ **Third level**

The third level is related to those processes and things which must be formed inside the organization, and should be paid attention to in order to give hopes of the development of creativity and innovation.

1) Motivation:

The innovative organizations actively encourage the training and the development of their members in an updated manner. They provide for their staff high level job security in order to reduce the threat of firing for making mistakes. They encourage individuals to be changeable. When anew idea develops, the pioneers of change actively and with eagerness, give the thought to excellence. They support it. They overcome the difficulties, and they ensure that the innovation will be put into practice.

2) Partnership:

There are many unexpressed opinions in the organization which expect their emergence. But, for finding new and correct creations, the organizations should create a significant improvement. This improvement requires a process which evaluates the inside and outside, customers, providers of the raw material and opponents, the demographic changes, policies, the economical environment, the regulations and laws, and the political background. Initiatives from meetings with internal brain storms never result in good occurrences that can exceed their groups of place. When a massive group of individuals are being participated in different processes and projects, this not only dose motivate the individuals' eagerness, but it will also increase their activities, and consequently, their efficiency will become grater. In turn, this encourages the individuals creativity and innovation, because it confronts the individuals with the subject, which making them eager to explore new and different solutions [13].

3) Team work:

If we want to see purer ideas in an organization, we are to invite them to team work. This fact, regardless of the matter that it causes better work performance due to many individuals, their abilities and group participation, it also provides a background in which the individuals besides coming to know each others' ideas, improve and expand their own ideas, and in this way, newer ideas emerge. Diversity is a difference that exists between different individuals. The innovation process should cover the cooperation between functional units, all genders, all ages, all races, all ways of thinking, and also all the shareholders, customers, providers of the raw materials, and opponents.

4) Organizational commitment:

What is referred to as organizational commitment is a bidirectional procedure that cases the individual while being trustful to the organization, to be committed to the obligation of the main organizational principles; also, he attempts to the advancement of the organization; which, this leads the individual to make attempts in lines with the creativity and innovation in his intended organization.

5- Delegation of Powers:

Individuals should be delegated in such a way that while the individual is responsible he can make choices, not just like a machine which is a mere operator. The delegation of power to the individuals causes them to explore and find appropriate selections. This matter, while increasing their eagerness to find newer solutions, will increase the creativity and innovation, because they are in

possession of powers and authority to act. Innovation can not be achieved via imitator and disabled workers [15].

6) Education and Training:

Innovation requires new approaches of thinking, and new skills. Providing an educational process and an updated, active and timely training can effectively guarantee the desired results by the innovation teams, the same as learning every new skill. Innovation qualification over time while the individual is working on real designs becomes fertile and blossoming. Education and training is the living organ, and a key of the development of this qualification.

7) Job and educational Productivity:

On of the most important factors which must be regarded is that the individuals be employed in their main job and educational areas to be more effective. In this way, while the individuals have better efficiency, they can be more creative and innovative in their works, because they have the job knowledge and capability.

8) Continuous improvement thinking:

As we all know it well the advancement of the human society has become possible through the continuous improvement thinking. If this was not the cases, instead of using the modern world, we were looking along in the primary caves to eliminate hunger. The stagnation, and not attempting to improve the conditions are among the main causes that putdown the creativity and innovation the organization. This thinking should be internalized in the organization that for survival and development, everyday we should be better than the previous day, and we should not stop at the previous solutions.

9) Infrastructures:

For the new ideas to be born, for the individuals to be able to produce new ideas, it is necessary to meet the requirements of the creativity and innovation, and the execution of the new ideas become possible. For this reason, each organization should provide the main infrastructures. These infrastructures whether systematic infrastructures of organizational processes, or administrative and technical infrastructures are required [11].

10) Using techniques:

To lead the individuals of an organization toward creativity and innovation, it is primarily necessary for the organization itself to use techniques of new technologies in order to both create the possibility of updated innovation and creativity in the individuals, and encourage them in to doing it.

11) Knowledge of data mining:

One of the other problems notable in the model is the discussion of data mining. According to the researches, it is considerable in the organizations. Data analysis helps significantly the creativity and innovation. As MIT university has declared the knowledge of data mining belongs to the 10 developing sciences which will cause a technologic revolution in the next decade. For this reason, over recent years it has spread in world with an astonishing pace. Today, the available data doubles every three years. So, an organization is able that can manage at least 7% of its data. With respect to the great diversity of the audience, customers, markets, and the diversity and complexity of services, and business environments, access to appropriate data is required for making correct decisions. For this reason, using appropriate approaches for classifying and producing information from among a considerable amount of date is necessary and vital for the organizations. The knowledge of data mining is a tool that enables the managers to react to the future more quickly, and be active rater than to be reactive to know and to be sure, not to make guesses [12].

12) The ideas system:

Many of the innovation designs in their primary stage are stopped in the corner of the libraries or are abandoned in from of wallinstallation, because the participants (thinkers) are not capable enough to follow up and execute what they have proposed. The presence of an effective system which acquires the data, and modifies them, and involves the individuals in the executional processes, is a fundamental and vital part in the process of innovation, the same as an accountant whose presence is vital for the financial health of an organization.

13) Interrelationships between thinkers:

It is quite natural and necessary that some requirements should be met for the increase of efficiency and creativity, by which the thinkers can establish interrelationships, of course, providing creativity circles is one of the appropriate ways to establish these relationships; yet, other approaches and methods in different countries was discussed at the beginning of this article.

14) Staff adherence:

Job adhesion shows the limit of staff adherence and their love of the work. Some individuals enjoy their jobs, and consider them to be the central part of their lives; which, others hate their jobs, and they do it only because they have to. The organizations that give significance to creativity and innovation, manage the possible potentiality of their staff in all individual team, and

organizational levels: they expand the potentialities and make use of them. They cultivate justice and equality. They make the staff to participate in the activities. They empower the staff. These organizations in a special manner look after their staff, establish relationships with them, appreciate them, and give them rewards so that their motion and commitment are provoked employed their skills and knowledge in line with the organizational interests, and the emergence of the idea.

15) Political Atmosphere:

The thinking of creative and participant citizenship, as an objective and an approach, in line with the historical changes of the emergence of new ideas, can work as an approach to abandon the invariability which is dominant on the present processes in our society. While the approach based on creative and participant citizenship is process oriented, it is after exploring the necessary for the social dynamism. As must as the approach based on collectivism and its intended power is stagnant and free of the spirit of historical dynamism, the citizenship approach posses the element of creativity and dynamism. In this approach, the power is a product of dialogue and participation which reveals itself in the dominant discourse [5].

6- DISCUSSION AND RESULTS

According to the intended CIG Model, this conclusion was obtained that in a determined environment this hypothesis held that to achieve various objectives different ways could be employed. The emergence of creativity and innovation, with respect the intended discussions, beside the suggested ways of the represented models in the previous parts is quite accessible for the organizations, and companies. What is to be discussed here is to purse the procedure of creativity and innovation. For pursuing and expanding creativity and innovation, an its approach efficiency in an organization, the following factors should be greatly accounted for:

- **Ownership:** When a big idea emerges, the thinker will execute it if he is in possession of the facilities. In such a case, the manager of a commercial unit owns an idea, and has employed time, rare resources, and funds to run the execution of the project. If the managers are not in possession of enough funds to run the execution of his idea, he will not usually be successful. The managers of the commercial units are in the need of that the purchasers of new ideas are new comer individuals who can grant the commercial units opportunity to become executable.
- **Process:** When the organizations make their heads to adopt new innovations, they

usually provide some trainings, tools, and techniques. The create innovation teams. They plan the meetings of brain storming. Finally, after six weeks of these activities they realize that the innovation dose not run. The innovation requires a process which focuses the individuals' views on the right and important issues. It will direct them in an organizational process. It discriminates the innovation, and evaluates it so that the appropriate beliefs are moved toward execution?

➢**Resources:** The directive board member often in the stall on giving annual speech state that: we require more innovations, and then they move on to their intended discussions. The innovation requires time, energy, and financial resources. The individuals should be in possession of an opportunity to be free from the present work to think about the available backgrounds, and new capabilities. Also, they require new skills and systems that support the thinking and the cooperation. The innovation is vital for survival in the future; but, such a thing depends on our present investment on innovation.

➢ **Tools and Standards of measuring advancement:** Ina healthy environment of innovation, more ideas are provided than the ideas that are executable and applicable. This matter can overload the team work, and become the source of their difficulty, except that their is a mechanism for the ordering and the priority of the ideas. Creating guide scales for the evaluation of ideas prior to entering the case of early ideas can be logical tool for the assessment of the ideas, and putting down those in appropriate ideas which do not concord to the standards.

By studying and evaluation the innovation models, and their analysis it can be realized that a creative individual is not necessarily a more Intelligent individual; rather, attendance to the individual, the power of imagination, education, being inspired, from one side, and from another side the society, and the conditions that are provided for the emergence of creative ideas, the organizational climate, along with culture can be effective on the more quick emergence of creativity and innovation process. Besides, the effect of inter organizational processes, which involve motivation, teamwork, organizational commitment, delegation of powers, and all other already mentioned criteria, can not be neglected. To achieve this goal, more attention should be focused on training the individuals, which requires strong and coherent education and training. The other important problem refers to the resource;

which, for the realization of innovation process time, energy, and financial resources are required. They are compliments of creative techniques and ideas.

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