

Uprising of Creation in Education

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Abstract

This research (Uprising of Creation in Education) aims at defining the importance of creativity in education, and its reflection on the elements of the educational process. Creativity is regarded an important element in the nations progress, which depends on the minds of their sons.

Creativity became the language of the present age, after the transformation of the educational and psychological scientists interest from studying the intellectual student to the study of creative student, and the factors that contribute in his creativity, and the role of university and the educational institution in developing and promoting the students' capacities in creativity, innovation, novelty, originality, elasticity, and criticizing thinking.

The researcher concluded a group of results like: Technological, perceptive and pragmatic revolution, discoveries, and modern inventions are fruitful results of the creativity of scientists.

The researcher recommended conducting studies about employing the achievements of creative revolution in education, and its role in solving social problems.

Keywords': Uprising, Creativity, Educational Process, Innovation, Novelty, Originality, Elasticity, Criticizing Thinking.

1. Introduction

The people live in the age of science and modern technologies. The state of science is prevailing all fields; Science is growing to be a characteristic feature, marking all walks of life in societies. The developments in the domain of science and their applications began to affect the progress of life. God distinguished man from all other creatures by granting him the brain, which is the center of thinking.

Creativity is regarded a basic element in survival and continuation; however the progress of nations depends on the real fortune which is existed in the brains of their people. Creation enhanced to be the language of the age, after the transformation of psychologists and educationalists interest from studying the clever and intellectual student into studying the creative student, and the factors contribute in his creativity.(Dhiaa Al-Khayat and others, 2014, P. 473-475)

The sector of education in the society is affected by challenges and renovations of the Globalization Age as the rest of the societies sectors. If education was the way to seamount backwardness, it wouldn't be so, unless if it accomplishes in itself change parallel to all surrounding changes in the current age.

The traditional method that had been practiced by the educational systems for long periods is no more acceptable to deal with the renovations of the current age. Those who are responsible for the educational process to adopt and react with the renovations and changes of the age, and to adopt the methods of creation in their minds, and in their methods in dealing with those who are working in the school environment, also in dealing with the issues of globalization, change and development. The senior employees in education are in need for administrative and teaching element equipped with technical knowledge, and creative skills to lead and execute the process of educational change in the educational institution and school. (Labib Ibrahim, 2011, p.220)

Creation is the main key to the progress of individuals, and societies. The road to the society of knowledge relied on developing creative capacities through educational systems to reach the state of creation in Education. The creators are regarded on the top of this human fortune due to their importance to face the challenges of the age. Nations of the world pin their hopes on them to catch up to pursue the carriage of development. The educationalists were willing enthusiastically to uncover those creators and innovators, in order to take the responsibility of inserting more effort in their patronage and carefulness, and to save the best possible ways to invest their creativity and develop it.

The university is regarded one of the Higher Education Institutions, in addition to education, which are capable at bringing out these creative scientific capacities. What is really required by university education: Developing the students' capacities in scientific thinking, creativeness, innovation, renovation, originality, elasticity, and the criticizing independent thinking

Creativeness is regarded from the priorities in the Modern Age, due to its importance in the progress of humanity and its future. Therefore the educational scientists increase their carefulness in creativeness—especially in the last quarter of the twentieth century—for its connection with the progress of nation and its development. For scientific progress cannot be accomplished without developing creative capacities of man. The development of societies is the responsibility of creative scientists.

Therefore the modern societies work as hard as they can to develop and consume the capacity of creative

thinking of their sons and students. (Fadhel Ibrahim 2007, p. 26-28). Education provides and equips students with knowledge, information, methods of thinking, creativeness problem solving and taking decisions.

Therefore, the university should emphasize on the importance of making abundant systems of training with high level standards for the teaching and administrative staff, and to put the standards, and the required ways to raise the excellence of the academic activity, and the efficiency of rendering to maintain creativity. (Alia Khalifi, 2013, p. 370-371)

Through the educational process, the humanity knowledge structure is unified and integrated, and the principles and the selective values are inherited among generations. (Ibrahim Shoqar, 2007, p. 139)

2. The Problem of Study

In the light of the current scientific progress, Information Revolution Technological Competition, Ideological conflict Among Nations, and what was accompanied and associated with many changes and complications in the relations among members, societies, and in all aspects of life, The importance of creation emerged, to be one of the means to pin the hopes on now, to face the temporary problems. This paved the way in front of the progressive countries to work on consuming their human capacities towards a better possible investment for its creative capacities, and to guide their creative sons into all fields of life. This orientation was a tool to overcome their daily life problems – the environmental and the population. This has assisted these countries in solving their problems, due to the right view on creation.

The process of creativity thinking is viewed as mental process from the first class, and is also regarded as the more advanced in the human mental activity. Also the creative capacities determine whether the individual is ready to show his creative activity in a remarkable manner and whether the individual who possesses the capacities, will really produce a creative production or not, the creative education contributor in creative production, and in defining the creative person.

3. The Importance of Study

The Creation Revolution in Education represents a human phenomenon lead into going out and departing the traditional thinking and knowledge into innovation, novelty, development; this will enhance producing concepts, theories, experiments, and new style of work, developed and suitable for the institutions circumstances and their potentials. The importance of creation is more increasing due to the challenges, and the continuous changes. Being interested and concerned in creativity and creators is regarded one of the most important priorities in the modern age for the progressive countries, who are paving the way in front of progress for it is the real and efficient tool in solving the different problems that stand as a challenge in front of the motivations of humanity and its future,

The First Demand: The concept of creation is language: It is derived and quoted from a verse in the Holy Quran – innovate means exist or originate – quoted from Surat Al – Baqara: 117, the word (Al- Badii) is one name of the Al- Mighty God, and it is derived from the verb "Abda'a, and Abda'a something means to "invent" it - (Ibn Manthour, 1994, p.6).(Abd El-Qader Ramzi, 2005, p. 982 -983), terminologically speaking: novelty, renovation, creation, invention, and inventing are synonymous terminologies, designed to be an elastic accumulative human process, to develop an ancient idea, or to find a new idea, whatever the idea was small, to obtain an unfamiliar extraordinary production, can be easily applied and used. (Marwan Al-Noemi, 2011, HasanHarim, 2003, p. 206). The capacity of the individual to produce a maximum quantity of thinking fluency, spontaneous elasticity, originality, remote association of ideas, as a response for a problem or exciting attitude. (Ahlam Al-Eithawi, Asma'a Al-Kawari, 2011, p. 246).

Creation might be identified as new concepts, beneficial and contacted with solving certain problems, or gathering and reconstructing the known modes of knowledge in unique forms. Creation is not limited on the technical side, for it does not include the development of goods, and the processes concerning them, and preparing the market only; it transcends and exceeds the machines, equipment, ways of industrialization, or improvements in the system itself, results of training, and the satisfactory of the work accomplished, which leads into increasing productivity.

Creation is the individual's vision to a certain phenomenon in a new way. Creation is required a capacity to feel the existence of a problem requires treatment, then the potency to think differently, creatively, and then find the proper solution. (Bu Hadid Laila, 2014, p. 104)

Some researchers and Sternberg was one of them assured that the process of developing training programs to promote creative potencies, and measuring their effectiveness are regarded from the complicated processes, for there is no obvious and comprehensive meaning for creativity (Sternberg, R.g 1999)

Torrance identifies creation that it is a mental process helps the child to be more sensitive, and conscious to the problems around him, and more efficient to find ideas, and search for solutions, and more able to predict, and to

find assumptions, and more able to predict, and to amend the results until he reaches into the creative behaviors, and to transmit it to others. (Torrance, E.P, 1996)

The scientific creation is connected to any new discovery in the laws of science, and to build new relations with nature, and looked at as a distinctive factor, and a flying imagination, obliging us to reconsider the prevailing scientific facts, and to develop them.

Taking into consideration that a creative scientist cannot be creative unless he depends on other scientists' efforts to build on them, Social circumstances must grow and ripe; and so creativeness is a conscious reading, so it is important to reconsiders and study the accumulative scientific findings. Creativeness is everything that assists in ascending science as far as we can – new ideas, new methods, testing and scientific cooperation among creators and innovators to find renewable ways and means. (Vadim Rozin, p. 58-59)

The researcher thinks that creativity means the vision of individual to the manifested visible material, through a new method with the potency of feeling the existence of problem to be solved, and the capacity to think differently and efficiently, and then to find the suitable solution by adding a new thing to the other, or reconstructing another style more effective and brilliant than before.

4. Theoretical and Practical Creative Education Background

Creativity occupied human minds since the ancient eras of history. Ibn Sina (980-1073) explained this saying: It is the highest rank of formation and creation; while the history of studying creativity in the west in the field of education was an independent subject until the middle of the fifties in the twentieth century, after establishing the creative Education foundation by Alex Osborn (1888-1966). Guilford set up his experiment connected to the structure of intelligence, while Torrance set up an experiment dealing with creative thinking, known by his name, aims at measuring the creative powers of students. Creativity contributed in developing the whole society, and education is the basic stirring of the students' creativity. It is noticed that the theoretical frame of creative learning is ascribed to the behavioral school, precognitive school, and constructive school. There is an intervention between creative learning, and the formation of modern skills, like: ambition, enthusiasm, and finding creative solution for the problems.

The interest of learning phenomenon is increasing day after day. We talk now about learning that help increasing the scientific understanding of learning and the means to develop it. Learning is naturally something new, it happens when man is affected by others, and the environment around him all the time, and creativity is distinguished in the same characteristics.

The efforts of western scientists in the middle of seventeenth century until now, did not yet reach to a theory and comprehensive principles that could interpret and control learning process. Discussion are increasing to be sharper, after the spread of precognitive learning theories, and the school of creative organization, and the summons to establish centers, and creative spaces at higher education, to be harmonized with the accelerated growth of the society of knowledge. Britain is regarded from the pioneer countries in supporting and spreading the creative learning, and considering it to be one of the characteristic of the successful learner. (Salim Al-Husneyeh), 2011, p. 134-135)

The creative learning concentrates on the learner himself, to be responsible in his learning and look forward to build a successful future. It is not only a matter of abridging the creative learning into learning something new only, but exceeds it into using new method and useful in learning, like taking initiative. Creative learning might help the student to discover creative powers inside him, it also assists the learner to think deeper, and higher productivity. The researcher concludes that creative learning as a field of talent can be rendered by any sane person. The maximum limit of creative productivity might lead to a supreme rendering in creativity.

The creative learning is a shape of the creative behavior that leads to self – dependence, and into new learning in addition to the knowledge, and acquired skills. Moreover, it acknowledges the originality of the new learning by the specialists, and its benefit on the society. In other words, the creative learning is by itself the creation of learning, and not acquiring or reproducing it. This can clearly noticed in the creative methods, which include the challenge of the prevailing learning, assumptions, and learning through imagination, to what things might be like, learning through forming new concepts, and through insight mental perception, and learning with trial and failure.

The British Committee for Teaching and Creative Culture issued a report saying that teaching creative issues include encouraging motives and risk, consolidating experience and tests. Teaching creative issues include originality, and creative motivation.

The European Parliament decided to select the year 2009- a year for innovation to support the efforts exerted by the member states to consolidate innovation and creativity, by learning all the successive eras of life- time for it is a key factor to develop the man character, his career, social potentialities, and well-being and luxury for all members of society.

The researches held under the custody of "CLASP Project", showed that creative and innovative learning include

the four standards: teaching to be closed to the life of learner (To satisfy the need of the student for learning), and the learner learns for himself (Self – motivation and capability for learning), and to dominate the methods of learning, and to innovate and create something new (radical change and development for learning), these are the factors that formed capabilities of creative learning.

The U.N.E.S.C.O. identified its vision towards universities that they are more efficient in finding the best solutions for the human, economic and cultural societies, it took the responsibility of acting the role of the methods of modernization and development, and formulated this vision in an equation, in which the graduate becomes the practitioner, researcher in addition to a successful investor, and coordinator to job opportunities.

The innovative rendering in the Arab World is regarded as the weakest point and a gap of innovation with the rest regions of the progressive world is the most obvious, deepest and the riskiest. The Arab Organization for Education and Culture, and the Arab Strategic Sciences for Creative Development of Higher Education

There are measurements for the students' preparation to the innovative thinking, and the creative capabilities in them. It was found out that innovative and creative capabilities are common among all people in different degrees. It is possible that innovative and creative learning can be an essential factor of the progress of nations in all levels, especially in Higher Education (Salim Al-Husneyh, 2011, Previous the reference, P.136-138)

5. The Importance and Benefits of Creative Revolution in Education

- 5.1. The Importance of Creative Revolution in Education creativeness century, remarkably among all progressive nations that march towards progress. America, Europe and Japan were the first to be interested in emphasizing on the in front of studying creative thinking, where Guilford referred to this in 1950, in his speech imprint of American Psychology Foundation, in which he presented his modern pattern about human mental structure. He summoned researchers and scientists to plan and be more interested in this field. He planned in a conscious pre determined manner, in all private social institutions and formal ones; like family and school (Aisha Tawalbeh, 2012, p. 119, Fathi Garwan, 2008).

The creative phenomenon is one of the phenomena that progressive societies attach more importance on. This phenomenon requires more efforts by the students and the continuous patronage of teachers and the senior employees in the field of education. The mission of teacher is no more conserving order in his school, and to assure that everything goes as per the schedule put in this regard, and to register the absentees, and to prepare all circumstances and potentialities that assist students to grow physically, spiritually and mentally towards creative thinking.

To develop the skillful students this require to fulfill the conditions of modes and methods of education, and the materialistic capacities like buildings, technology, man power represented in good preparation of teachers, and the school administration and the careful consciousness of the teaching administration through the different stages of education.

The effectiveness of creative education depends on (School administration, teacher, student and syllabus) among each other, in which enables the teacher and the student to practice the creative method in a conscious effectiveness in a scientific climate prevailed with love and estimation, and the democratic method of dealing. (Reyadh Sammour, 2009. P. 94-95)

Taking care and interest in skilled and creative learners was the priority for progressive and civilized societies this was clearly seen in the field of education and teaching programs that operate on the patronage of creativity, developing and motivating it. Since the skilled learners are innovators and creators, it is noticed that their psychology is different from other normal people. (Samir Al-Jamal, 2014, p. 154)

The societies were interested to assign and invest the knowledge/epistemological explosion quantitatively and qualitatively in the daily life in an educational and scientific way, in order to obtain the desired objective. To reach to a better life level, and the states of the world to continue progressing in their scientific status and technological production, it is necessary for their sons to be innovators and creators in order to fulfill innovation, significance, and the continuous impression.

To guarantee coping with this epistemological expansion, scientific development with creative skills, the education role to fulfill this requirement was noticed effectively. This need depends on all the knowledge trends, in addition to the skills depending not only on brains and minds, but also the emotional knowledge that depends on imagination. Also they depended on variety of philosophies, and suitable learning theories. (Ali Al- Shueily, Ali Al Ghafiri, 2006, p. 23)

The twenty first century needs creative and skilled brains to be adapted with the changeable circumstances, and their needs for change which happens in their surrounded environments, in order to cope with the movement of development, to give what is new and unique in different fields. We are living in an era in which explosion of sciences and knowledge is accelerating in the whole global village. This means that when a new idea is existed, than the technologists hurriedly cease the opportunity to exploit it to create a newer invention. The skilled and

creators are now forming the greatest hope to solve the problems that threaten the human race. They are now regarded the national fortune for their people, and the momentum towards civilization and prosperous, life. The human race constitutes an important fortune, and basic element for change and development. Therefore progressive and developed countries opened their doors in front of creators and skilled innovators all over the world, and opened all opportunities in front of them and paved the way into preparing the proper climates to sponsor them and invest their creativity and innovative capabilities in all fields. These developed countries became a successful market for creators and innovators.

The sponsorship of skilled scientists and developing their potential skills as an educational material, or even a group of subjects is a common responsibility, and distributed among all studying subjects. This should begin from very early ages, and continue through the whole life of the individual to be a straight track in his march in the field of science and knowledge, to be in-rooted in ones' mind and emotions.

The teacher has an important role in accomplishing this objective. The effectiveness of this role depends a great deal on the teacher's convincement on sponsoring and patronizing the creative students, and the necessity of searching and discovering innovative and creative students. The teacher should be regarded the basic element of the teaching process, without him no any syllabus could accomplish its objectives without the help and assessment of the teacher, whatever its contents were selective, precisely planned, or miscellaneous ways of teaching or evaluating this syllabus. (Maison Al- Zobi, 2014, previous reference, p. 143-144)

The school should teach the student how to think, and how to search for information not only those of future, but also to exceed this, by taking care to develop the various aspects of the individual personality, to be able to learn, search, innovate and create in all fields of creation. (Fayez Shaldan, 2010, P. 19 & Fouad Al-Ajiz)

With the necessity of functioning the innovative and creative capacities in solving many of problems that require variety of solutions far from traditional ones, which is enforced by the real society we live in, the societies that are changing all the time on daily basis. Sometimes we don't have ready and proper solutions for them to solve, but we have to keep searching for new and variable solutions able to be executed.

Therefore, this requires innovative skills, and the ability to analyze, evaluate, and develop, so as to be able to execute them. (Mahmoud Ukasha and others, 2011, p. 18)

It is possible to interact the role of the capital of knowledge/epistemology in accomplishing creation and innovation through encouraging the work of the team, and to condense training courses to develop the capital of knowledge, and to spend money on industrializing, activating, encouraging innovation, and increasing the dependence on modern technology in frames' transferring. (Hasan Omar, 2013, p. 365)

The innovative values represent one of the effective motivating factors of the innovative behavior in the educational institution. This requires us to grasp firmly and know the importance of its contents. It is also important to sponsor the leaders, and those who work to enhance these values and nourish these systems, and work for the spirit of everlasting such values (Sultan Noufal, Basma Al-Qattan, 2013, p. 55)

To be more interested in creative and innovative thinking among students is a necessity imposed on us by the nature of the age. The role of thinking and creation helps in the refinement of human societies, as it is believed that the real revolution for any nation lies in the creative revolution that produces innovative minds. The school plays a basic role in developing skills of innovative thinking through class activities that help student to be creative and innovative. The school which develops their students' skills, is one that cares to apply the basic principles in the healthy education, and practice the continuous development, and that cares for the quality of accomplishment, and develop innovation. (Ammar Al-Freihat, 2013, p. 80-81)

The researcher thinks that the importance of creation revolution in education requires building a strategy for creation and innovation, concentrates on the interaction among the elements of the educational process, and the cooperation among the institutions of society to sponsor skilled and innovators, and to motivate them on contributing solving the social problems.

There is a constant value for creation in essence, but might be changed in form and picture, and all what is related from trials aim at discovering a human world that is formed to reflect visible aspects in the universe and life. (MahaNaser, 2008, p. 79)

5.2. Benefits of Creative Thinking:

Creative thinking has an immense importance in the march of scientific excellence; the following are the most beneficial ones:

5.2.1. Innovation/Creation: innovation and creation are regarded the most important output of education. We can notice this phenomenon, among those who were taught a surpassing and model education.

Children are the best students to learn, when they are given the opportunity to learn in ways that are suitable with their capabilities and motivations.

Therefore when teachers change their ways of traditional teaching, into ways that are nearer to their capacities and motivations, this will probably accomplish the creative and brilliant education.

- 5.2.2. Development: to insert amelioration and betterment on things this leads into optimum benefit. This development is one of the characteristic features of the innovative thinking that in-root in individuals an inclination towards development, improvement, and to search after these, and to avoid long stopping at the familiar, in specific, in the fields where development progress require development in their tools, and the procedures taken in administration, procedures and regulations, and in the ways and methods of scientific research, its tools and systems:
- 5.2.3. Organizing priorities: organizing priorities due to their importance, and their affect, and the need for it, is an indication and guidance to innovation and creation in the individual. The person, who can organize the vocabularies of his speech in accordance with their logical sequence of events and their affect, is regarded an innovative personality in displaying views.

Creative education forms from individuals characters able to organize things or cases due to their priorities, in order to affect people around you, and to know how to invest what is available and granted, and saving time, effort and cost.

- 5.2.4. Good choice: the choice of good things in a place surrounded by the factors of ambiguity or similarity refers to the intellectuality of the persons, cleverness, and his creative and innovative choice for things. Here is clearly shown the depth of scholastic education in obtaining and fulfilling good choice, which reserve time and effort from disappearing.
- 5.2.5. Actualizing and Implementing the scientific methodology the creative thinking up brings and educates the teacher and those who are using scientific methodology depending on evidences and indications, this avoid the learner from being carried away by fake currents. (Marwan AL- Noemi, 2011, p. 220-223)

6. Levels &stages of Creative Motivations

6.1. Levels of Creation:

Creation is manifested in a variety of levels:

- Creation on the level of individual:

This type of learners usually has a creative innovative capacity to develop work. This happens through natural characteristics, like intelligence and talent, or through earning characteristic, like solving problems. These characteristics could be trained and developed on certain intervals.

- Creativity on the level of Groups:

There are specific groups in work that cooperate together to apply the ideas they have, and to change things to better stages, like an artistic group in production division for example.

- Creativity on the level of organization: there are distinctive organizations in the level of rendering and work. Mostly the work of these organizations tends to be ideal and model for other organizations. For organizations to reach the level of creativity there must be individual and group creativity.
- Administrative Creativity: this is connected directly in organizational hierarchy, and the organized administrative process, and indirectly with the activities of the basic organization. (Bu Hadid Laila, previous reference, p. 104-105)

6.2. Stages of Creativity:

The process of creativity passes through a variety of stages like the following:

- 6.2.1. Preparatory stage: It represents the preceding preparatory stage of creativity, like activating and motivating individuals, and then to collect data and information connected to the problem.
- 6.2.2. Nursery stage: The stage of interacting the information and data in the sub-conscious. There the mind comprehends all the information related. The imagination in this stage activity usually exceeds.

6.2.3. The stage of inspiration: here the new thinking is revealed on the shape of radiant illumination; awaken the creative individual to be in a state of discovery after the completion of inspiration stage.

6.2.4. Stage of Investigation and credibility: This is the stage when the new idea reached by the creator and innovator is tried and tested. It is preferable that every creator tests his creative idea before announcing it, and assures its correct mess. (Ahlam Al-Eithawi and Asmaa Al-Kawari, p. 251-252, Isam Al-Fuqaha, 2002, p. 30-31)

6.3. Motivation of creation and Innovation:

- To increase the promotion and advancement of the creative thinking through the usage of modern teaching method, like investigation and discovery. The programs put for the advancement of creative thinking work on developing creativity. The student is the center of this learning, and the teacher is to direct and guide the promotion of creativeness.

- To develop the creative and innovative capacities that reside in skilled, innovations, genius and above- average students, so as to be able to invent their skills, and creative capacities. First we have to search for them and find them, then to render the required sponsorship according to a special institutional system.

- To improve educational quality, and the services rendered to the distinctive students who are allowed to contribute extra ordinary to their societies.

- The cultural, economic, and social experiences, the individual lives within the environment of the family and the environment, has a considerable affect on the formation of the individual's character. The high cultural, economic, and social levels of the family make it possible for the sons and daughters better opportunities to practice the activities that help improving the innovative capacities through providing them with the suitable titles, and to make them participate in discussions with elderly people. Moreover, to give them considerable space of independence and freedom that can improve their innovative capacities. (Atef Al-Aqraa, Mahdi Hijris, 2009, p. 147-148)

- The potential energy of innovation of innovators is dominated by three arbitrary powers that motivate the innovation and creator towards innovative production they are: mind, emotional feelings, and administration. (Hafez Al- Shammari, 2010)

Fifth Demand: Constituent of Creative Thinking The creative thinking includes a number of constituents or elements, the writers and researchers contrasted in specifying it. Some name it skills, others say capacities, and others tend to express it by the term characteristics or features as the following:

1- Fluency: It is the capacity to produce the largest of innovative thinking. The creator is surpassing and excelling through the quantity of ideas he suggests that a certain subject in a constant time unit in comparison with others. It is easy for him to generate these ideas.

There are a variety of factors for fluency:

- Expressional Fluency: It is represented in the capacity of individual to recall and summon the largest number of meaningful sentences. These contain words given through certain arrangement, or those contain letters. The examples of tests that measure this factor, the test of the structure of the four words. Init the test-taken is given the first letter in four words, and then he is asked to complete the words in a specific time in a larger number of ways and methods, in order to form from them useful meaningful expressions.

- Word Fluency: It is represented in a hastier larger production from words and sentences of different meanings.

- Conceptual Fluency: the capacity to produce concepts and imaginations.

- Associational Fluency: It is represented in the speed of larger production of words that have a kind of relation in meaning, also the potency to produce the largest number of meanings for one context. (Dhiaa Al-Khayat& other, 2014, P. 146)

2- Originality: To produce the largest ever known words and ideas, far from repetition, and the uncommon responses, and unique. When the idea, image and activity are original, this means that nobody has ever reached this level before. Originality is measured in a variety of measurements, like: measuring the headlines of stories of Gilford, also measuring impossibilities and distant results. In the measurement of stories headings and titles, a short story is given, then the student is asked to say and give possible titles to this story. The untraditional and irrepitive in the statistic meaning is given the best estimation. In the test of impossibilities, the person is asked to mention what would happen if something impossible happens, like: What will happen if an eye – glass is invented, and the person who uses it can see what is inside what the people think. The degree is estimated by then number of good ideas, and the less repeated – scarcity – which is an answer to that question. (Maisun Al –Zobi, 2014, p. 146)

- 3- Flexibility: It is the capacity of the individual to change his mental state, due to the change of attitude, in other words, flexibility is opposite to mental obstinacy or inflexibility. The creative personality is supposed to be a highly flexible personality to be able to change his mental state, in order to match his creative innovative attitude or stand.

There are two basic factors for flexibility:

- Adaptive Flexibility: It is the potential capacity of the individual to change his mental direction, when he is faced to solve a certain problem; it is regarded as the positive part of mental adaptation.
 - Spontaneous Flexibility: It is represented in the potency of producing the largest quantity of ideas that are related to certain attitude. The ideas regarding this attitude are supposed to be miscellaneous. This potency is measured by testing the unusual usages for specific things, like: To use the magazine or a newspaper in thousands of usages, not only for reading. The measurement of flexibility and its potencies can be measured in several ways, for example to notice and remark the number of movements from one idea to the other, or from one type to the other of the contents in one context. The flexibility can be noticed in artists and men of letters drawing their success in producing different renovation which don't belong to one frame.
- 4- Elaborateness (Extension): Innovative thinking requires the availability elaborateness factor, which is the capacity of individual to add details, and the extension of the basic idea that had been produced.
 - 5- Sensitivity towards problems and the conservation on oriented course and continuing it without interruption: to feel and sense the problem is regarded one of the most important factor in the process of thinking in on obvious visitor, and specify it in a most distinctive manner, and to identity its nature, volume, dimension, influence, and the relations among these facts. The saturation of this problem or subject in the person interested, this would inspire innovation and creation, the more the individual inserts his efforts in studying the problem, the opportunities of reaching new ideas would increase. This activity includes the increase of awareness the individual inserts various efforts to know the problem from all its various dimensions. (Abed Hamayel, 2010, p. 173-175, Abdel – Sattar Ibrahim, 2002, p. 24-32)

7. Features of creators and characteristics of creative thinking:

There are some features distinguished by the creators like mental characteristics represented in capacity of producing the maximum extent of the restful new ideas within a specific period of time, flexibility of thinking, and the capacity to change the thinking orientation more easily, to adapt with the changing circumstances.

Moreover, to be able to organize the ideas in wider fashions and modes, prior to reaching constructing the new model of thinking, though: imagination, literary works, structure, construction, analysis, reorganization, the perpetual withdrawal, from the familiar, and thinking in the way of asking why?, how? And to realize the direct relation between the ways we look forward to the future, and what the future will actually be. Also, to depend on the dimensional thinking, and there is not only a certain way or solution to solve a problem and the independence of thinking. As for the personal and motivated characteristics, lies in the tendency towards risk, the acceptance of ambiguity, and not to be restricted to information and regulations, and to break self-restrictions, and the inclination towards flirtation, fun making, joking, and to change crisis into opportunities, even if this happened among a group of changes, which appears from the first instant that a crisis is going to take place, and not to exaggerate in exerting efforts, more than thinking of obtaining results. To try to analyze the probabilities of success in a most precise manner, and the ability of taking initiative steps, and the strong self – commitment towards school, and to respect others views, possessing self – confidence, sense of responsibility, and to be enthusiastic to ones ideas, and implementing the reality, and the openness to the new experiences, to be committed to work, deep implementation, ability of adaptation, courage in expressing ones point of view, and the required suggestions.

As for the knowledge characteristics, they are represented in: reading; tendency for research and investigation, and to use the existed knowledge as a basis of producing new ideas, and the capacity of dealing with symbolic systems and the abstract ideas, and the miscellaneous interests and hobbies.

The capacity of innovative and creative thinking is regarded one of the most important features that distinguish the personality of the innovator. The creative thinking is formed in a way which might lead to creative results. The individual is called creator when he accomplishes innovative and creative results. The results are regarded innovative and creative when they contain originality, elasticity, fluency, and the creative learning refers to the process in which the learner feels the problems through the information he attains around him, then gathering the information, and reconstructing them in a way helps him to specify these difficulties, or to find the lost factors, searching for solutions, put the guessing, collecting information formulating expressions, in order to obtain the required learning objectives.

Therefore, the teacher is required to promote and consolidate his cultural background. He is no more a means of transferring knowledge, but he is innovative, creator, and should always renew things, and open – minded responds to every things, and open – minded responds to every new idea, inverts it and works on developing the learning process. The leadership of the teacher in this new frame of innovative and creative leadership works on preparing the best effective ways and circumstances to develop the learning generation.

The successful teacher can be noticed through the success, innovation and creation of his students.

It is well – known that learning might release the students' skills, and might extinguishes it. The traditional syllabuses might lead to weaken the students' capacities, and their mental potential energies, due to the concentration on learning their curricula by heart, and to be satisfied of their students to pass the practical examinations, while the modern syllabuses try to emphasize on the importance of elasticity and renewal from concentration on learning by heart, and make from information a basic rule for understanding, analysis, application, mind- improving, and creation, (Maisun Al – Zobi, 2014, p. 147 – 148)

Generally speaking, there are essential principles, teaching talented persons depend on:

- A) The teacher should explore the stages of students' development, the way of their learning, to be able to choose the learning objectives, means and suitable activities rendered by students.
- B) The teacher should give repetitive opportunities; allow revealing and discovering tools and means to solve the problems through direct experience.
- C) The teacher should be concerned to give the students miscellaneous tests, this lead them to self independence, self – confidence, and sense of responsibility.
- D) The teacher should allow the students to practice miscellaneous activities, and the freedom to learn individually, and to allow individual and group participation.
- E) The teacher should prepare a special plan for individual learning, so that he chooses the subject matter, ideas, and the activities to be given to students due to their needs and tendencies
- F) To learn and precisely master communication and dialogue skills and human relations with scholar individuals (Maisun al – Zobi, 2014, p. 148).

The creation is more dynamic and effective in the teacher's work and his authoritative Tendencies is less than ordinary persons. They give more attention to the practical side; they are oriented towards obtaining and acceptance from inside motivations, while ordinary persons do that to avoid the blame from others to their slow and failure activities. They show their balanced emotions, and they rarely face risks, and they work slowly and in saver alert when analyzing mattes. (Taleb Hussein, 2011, p. 11).

The researcher thinks that what distinguishes the creative student is his capacity of creative thinking in an unfamiliar way, distinctive by originality and flexibility. The teacher plays a basic role in the usage of modern teaching methods that contribute the arrival of the student to excellent results, with a modern scientific method.

8. The Innovative and Creative Uprising in Education:

In front of the accelerated changes the creative thinking gained an important rank in many of states of the world. What really refers to this influential rank: the multi number of researches and studies concerning this subject? The researchers and the studies concerning this subject the researchers and those others who work in the domain of education who are called for the necessity of training students on the usage of the different kinds of creative thinking, The dependence on using direct instructions in teaching and reaching to knowledge became an unacceptable case as a basic issue in learning and teaching, and to hold many conferences, public, regional, and international assemblies, which are concerned in its requirements. Among those evidences and indications on this rank of creative thinking, its great effect on the progress and development of societies. Technological, epistemological (knowledge), scientific uprising; in addition to the modern discoveries and inventions are all factors of what creators and innovators planted, in addition to the development of the individual character, self – realization, and his independence from traditional models of thinking. (Jamal al – Assaf, 2013, p. 271).

The researchers also were interested in the domain of education, in the subject of creative thinking and its applications that affect the character of the learner, and specify his behaviors in his environment.

Taking into consideration that there are obvious affects of various differences among the individuals in the nature of mental potentials that distinguish one from the other, the creative thinking is one of the scientific data of the behavioral differences among the individuals. The process of developing education is one of the important basic motivating stirrers for building generations through optimum usage of human potencies and scientific capacities, specially the creators in their societies, through taking care of them, and to develop their skills due to a progressive epistionological syllabus, which can prepare the suitable basic rule for outgoing scientific principles play its role in the society. (Mzahem al – Khayat and others, 2014, p.2).

The educational system in Jordan for example – witnessed successive development movements, the first was: the Movement of the First Conference of Educational Development in 1987, then the movement of Developing

Education towards the Economy of knowledge in 2003, which aims into developing all the parts of the educational process – its stages through investing human and knowledge resources as a strategic national wealth, and consolidating the capability for research, leaning, creation, innovation and to obtain the state of constant programs and growth, and the competition on the level of regional and international competition. There is a need to comprehend, the (vital importance of creativity), and the creative imagination and its effective role on life, school, and work. This all increase the interest in developing the process of syllabus, and the teaching methods where the creative skills must take place, aiming to enhance and develop children's creative capacities. (Kholud Al-Dababneh, 2007, p. 366-367).

The role of university in Creation

The role of universities administrations in this regard to work in preparing and saving atmospheres of forgiveness, justice, and freedom for creators, for this act allows the development of their skills, and forbids from forming negative attitudes towards study or university, in addition this contributes in preventing them from facing psychological, and social problems. (Yousef Awad, 2012, p. 169)

In the domain of the comprehensive educational policy, the university is regarded one of the institutions that contributes in the development of society, and the path towards preparing human forces, which are able to display their capacities, and the creative and innovative thinking skills, that give culture its dimensions, and move it towards distinction.

Therefore, it is the message of the university pivoting around preparing a consciousness futuristic pivoting around preparing a consciousness futuristic human being, able to face the changes, and to deal with the unknown phenomena. Moreover, the learner should distinguished by his criticizing innovative scientific mentality. He possesses a self-consciousness with a unique character. He has confidence and potencies to change the futures.

The member of teaching committee has an important role in motivating the creative thinking in students, and to find and prepare a good environmental university atmosphere to improve and enhance creativity among the students. They should regard the student university the pivot and the core of the learning process, and to regard feeding back a means to awaken the creative thinking, and to render the activities that encourage the creative thinking, and to give the students the opportunity to invest their experiences in on innovative way, and to present wealthy and effective provocative stimulants, and to ask provocative questions for debate, and training students of researches initiatives. (Fadhel Ibrahim, 2007, p. 30-31)

Educational Consistent Factors that are Contributed by the School, and Family in the Development of Creation:

- 1- To put the independent thinking basis for the child.
- 2- Encouraging ways of research and investigation among literate children.
- 3- Playing that stimulates the creative thinking
(Approximately and wide intervals)
- 4- Teaching through problems.
- 5- Developing the research activity of the student, to discover the piece of information alone by himself.
- 6- To work in groups, and to distribute the roles inside the team.
- 7- To be acquainted to the life of creators, and the ways of their lives, and how they used to think in their scientific problems, and how was it solved.
- 8- To encourage the (learner) to ask questions, and to encourage him to search on their answers.
- 9- The companionship of elderly people with young people, and to transfer the experiences without subjugate the capability of criticism.
- 10- To connect the assessment with the result in front of the learner, whatever they may be; experiences, information or works.
- 11- To exclude thinking methods which are not mental (Superstitious), the child might face.
- 12- To remark the development of the learner capabilities, and to enhance and develop the excellent potencies and surpassing capacities.
- 13- The learner should feel that he is accomplishing progress, in all what he learns.
- 14- To connect surpassing results with mental work, and creative thinking. (Abdel – Latif Mahmoud, 1999, p. 68)

The Elements of Creative Uprising in Education

1-The Creative Teacher:

After the second world war, and after the appearance of ideas connected to the making of the creative individual, the wide interest in developing the innovative thinking, and the realization of the effective role played by creators and innovators in all its shapes, and what is waited by the school from roles to play, might not be expected from any other institutions, since the school is more qualified than others. These are human,

materialistic, and physical factors that play variety of roles in the development of the creative thinking, the teacher is put in the first beginning of the list. The teacher might be affected in several factors: cultural, educational, social, economic and laws background. In addition to his personal features, his values, beliefs, and trends, either those were negative or positive towards the teaching of creators. These factors in common affect the strategy of his teaching, learning and educational aids, decisions, treating the students. The teacher is able to develop thinking if he possesses a number of characteristics and description like: capacities, knowledge, and skills. It is also possible to improve the learner thinking by separated syllabuses, particularly specific in improving thinking, or through different studying syllabuses. (Mohamed Migdadi, Shams Al-Manaee, 2010, p. 31-35).

The creative education needs a creative teacher well prepared, and is trained in a continuous manner, in addition to his strong personality, and to react with his students in a democratic way. He should specify the range of his creativity in the following activities:

1. Creativity in preparing and organizing the studying subjects.
2. Creativity in creating problems.
3. Creativity in planning lessons.
4. Creativity in his behavior inside the class.
5. Creativity in laboratory activities.
6. Creativity in the strategy of asking questions.
7. Creativity in evaluation.

Whenever the teacher was creative in his work, the society would ascend into better refined society. For creativity in the domain of teaching helps in preparing a generation that possess the scientific capacity to continue his practice life successfully. Our society needs creative capacities in these circumstances, it is necessary to search for the points of creativity of the individuals, and to refine and develop them.

Many tests were put to measure this general feature. They called them creative tests, which help revealing many of the creative aspects of the individual. These tests developed by the elapse of years, and were applied all over the world. Such tests revealed amazing results in the capacities and creative capabilities in the individuals. On this basis many of the governments had organized course and programs in developing creative potencies in the individual. This encouraged all skilled individuals in all fields of society, especially in the domain of education. (Shukri Shaker and Zeinab Abdel – Rahim, 2009, p. 1-2)

2- Studying Courses / Methods: It should be in the same level of students, and this induces different aspects and sides:

- The knowledge side: Represented in the information to be in systematic arrangement among each other.

3- Students: the basic factor, which all other factors are subjected and targeted work together to prepare them in accordance to the requirements of society. They are the outcome of the educational process, due to the plan put due to the philosophy of the society.

4- School Environment: the potential effectiveness of the creative education depends on the interaction of the teacher, students and syllabus, which enable the student to be confident of himself, and his potential ability for creativeness, creative thinking, curiosity, and the mental maturity of others ideas, and initiative. (Reyadh Sammur, 2011, p. 105)

5-Creative Administration: it is the structural, administrative, educational and methods organization that allow reaching their creative objectives in the activities and educational processes. It also works on preparing the school environment sparkled with democratic spirit and bearing responsibility, initiative, adventure, and personal freedom for every teacher to select, organize, and teach the educational requirement courses, it also allows opening halls and classes in additional times. It supervises and organizes the activities aiming at accomplishing the educational aspects in an innovative and creative manner. (Riadh Sammour, 2011, p.106)

The researcher emphasizes on the importance of a good creative teacher, in preparing the lessons, planning for the class and the objectives he formulates, methods, activities and evaluation.

He also should take into consideration the differences among individuals, their needs and tendencies that help him discovering the creative students.

9. Re-strainments of Creative Uprising in Education:

Creativity is like other activities in the mental life of human beings. The owner of this activity is supposed to be challenged and stirred up, and oriented in accordance to educational, psychological basis. But there are some re-strainments and obstacles, which face a lot of people and forbid them from reaching the rank of creativity, the most remarkable of these re-strainments are:

- 9.1. Personal Re-restraints: This is connected with the individual in the formation of his character like the fear from failing, lacking self-confidence, lacking of experience, lack of knowledge, lacking of ambition, and the pessimistic look at life.
- 9.2. Organizational Re-restraint: These are the re-restraints resulting from the organization, the individual work and deal with – like laws, institutional regulations. The policies, objectives, procedures, hierarchic organization, model of authority and the like; they all form and stand as obstacles in the way of creativity.
- 9.3. Environmental Re-restraints: They include the different development policies like: poverty, unemployment, and the environmental pollution and others.
- 9.4. Circumstantial Re-restraints: These are the re-restraints, which are related to the situation and attitude, or the social, and cultural prevailing sides, like: resisting changes, like using sharp and hard expressions against any new idea, like: This way will not succeed in solving the problem – this idea will cost too much.
- 9.5. Social re-restraints: This is represented in the creative re-restraints inside the family, like: the low economical, social, educational, and cultural levels. Also the negative attitudes of the family, and the authoritative social upbringing, and the distinction and preference between sons and daughters according to their sex.
- 9.6. Creative restraints at school: the most noticed the lack of suitable educational capabilities, and the prevailing traditional climate, the symbol of the authoritative leader. Also the restraints of creativity in the society, like: attitudes, the prevailing values in the society, like: values of obedience, submission, exaggeration in estimating the past, authoritative attitudes; fatalism; authoritative systems; distinction between sex; economical and social determination; accumulation of foreign debts, shortage of food, population explosion. These all affect negatively in the domain of education, especially political violence, security disturbances, and the wars in the Arab world which form a chronic phenomenon. (Labib Ibrahim, 2011, p. 230-231)
- 9.7. Scientific shallow: The lack or shortage of knowledge constitutes the most important restraint, forbids man from creativity, excellence, and development.
- 9.8. Satisfaction of what is available, with the capability to find better: To be satisfied with the ordinary education without trying to develop, and to go on in that path, will surely restrain the creative process. (Marwan Al-Noemi, 2011, P. 215-216), P. 217-218, Previous reference, Marwan Al – Noemi.
- 9.9. Shortage of sponsorship to the innovative creators and distinctive individuals: the ratio of skilled creative children from the age of their birth until five years are (90%), where they reach the age of seven, and the ratio of creative children is reduced to (10%), when they reach eight years, the ratio will reach into (2%) only. This refer that the educational systems, and the social customs and traditions work to induce the state of abortion to creativity in our countries. (Marwan Al- Noemi, 2011, p. 218-219)

The researcher thinks that the family is regarded the foundation stone in developing creativity in their children. Creativity begins before the age of five, this confirm and assure, the cooperative role between the family and the society institutions to build an innovative and creative generation.

9.10. Restraints related to education system and its philosophy.

- 1- The existence of authoritative attitudes, the unsuitable environmental circumstances, which reduce from the teacher's freedom, and impose on him the objectives, und activities, and put traditional patterns to judge the performance, in addition to impose inflexible syllabuses.
- 2- To make education confined to direct instructions only, without the other educational processes.
- 3- The prevailing of the concept of education for the sake of success only.
- 4- To restrict exams on the measurement of obtaining marks, on a limited range.
- 5- The existence of a dividing duality between work and play or study and activity.
- 6- The prevailing of organized behavior, and the mindful concern of time.
- 7- The absence of consciousness in the importance of talent, and the necessity of more consideration and patronage.

9.11. Restraints related to the teacher – his preparation and training:

- 1- The weak command of the teacher to comprehend the teaching material and its skills.
- 2- The teacher's bad relations with his colleagues in most times, for from the spirit of cooperation, in best cases, the teacher subjugate to his colleagues ideas in the educational process.
- 3- Training programs are confined on the old traditional ways in teaching.

- 4- The teachers are neither ready, nor prepared to cope with the needs of the creative students. They also do not know how to deal with the creative capacities nor its evaluation. Mostly they feel uneasy dealing with creative students.
- 5- Responsibility of teachers to finish their teaching curricula, they don't allow their students to go out far from the contents of the school book, in addition the untidy class and the unorganized design of the internal classes, it is also not allowed to make any changes inside such classes.
- 6- There is no serious atmosphere in the courses or sessions held, neither inside the training programs. He regards it as a vacation period the teacher goes far from the class and the students.
- 7- The teacher was not encouraged when he was a small pupil in the variety stages of learning to demonstrate his talents, and his creative capacities. (Maysoun Al- Zo'bi, 2014, p. 49).

The creativity of the teacher is fulfilled in the modes of behavior, which he shows them during teaching, where all his efforts in teaching concentrate on improving creativity, and to save experiences, skills, and the ways suitable for this through preparing opportunities for learning which can achieve and actualize the maximum limit the pupils might reach from leaving and creativity. The teacher should feel unsatisfied of the results, the existing educational procedures reached to. To feel that perfectness something cannot be reached, but we must always try to go forward towards it all the time. The teacher creativity also includes the existence of new educational ideas, and to prepare and be ready to experience other ideas, and evaluating them, to know the range of benefit from it in education. P.49. – level of conduct, Zeraa Magazine, previous reference.

10. Results and recommendations

The researcher reaches to the following results:

- 10.1.** Creativity is the basic key for progress. The society of knowledge depends on creative capabilities through educational systems, where the school renders an essential role in developing skills of creative thinking in the students, by evoking class activities that help students to creativity.
- 10.2.** Technology, knowledge, science, discoveries, and modern inventions are ripe fruits, which the innovative creators had planted, and harvested.
- 10.3.** The effectiveness of creative education depends on the interaction of the creative teacher, students, and the syllabus, which enable the student to build his confidence, and his capability for creativity, and the creative thinking, and curiosity.

The researcher recommends performing more studies about employing the creative upscale accomplishments in Education, and their role in solving the social problems, which depends on creative skills, and the capability for analysis, evaluation and development.

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