Information and Communication Technology, Teacher and Students Creativity

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ABSTRACT

At this research, primarily newest definitions which scholars and researchers provided about the creativity were discussed. Then, the role of education and the top of that, sensitive and important role of teachers in regard with various and extensive activities and close relation with students in the development and training of creativity have concerned .teachers could be play important role in the development of creative thinking, through the INFORMATION &COMMUNICATION TECHNOLOHY .though creativity have been the principal of progress and improvement at all era. But today in the era of information communication technology, need to the creativity more perceived. Providing interesting, useful, and attractive programs by the computer, are not possible without creative and thinker brains .then in the era of information & communication technology (ICT), the necessity of consideration of creativity training in society, more increasingly is needed. Therefore in this article discussing about the information & communication technology in the training students creativity is counted as necessarily. .

KEY WORDS : creativity, information & communication technology,teacher,creative thinking

INTRODUCTION

with day increasing of science and technology and extended flow of information, the today's community suffered to challenges and complications .and every community and organization for it survival and prevention from pausing and draw back are need for innovation and evolution of creative individuals till solve the day increasing problems with creative thinking transgression to them. Here organizations tasks, Is training the creative humans and innovator which could through collective knowledge and producing new thinks and collective communication, to remove the confronted problems. in this matter, message of training organizations specifically education as official institute trainer of scholar individuals, dynamic and creative, increasingly appeared .the leading educative organization is follow on the preparation of the today students for campaigning with big and small challenges in the future of the world and the instructors and teachers of this organization know that their traditional role as descriptor of school book and questionnaires of lessons has finished. And future generation expected them that compilers of life skills as like creative thinking, problem solving, criticize thinking, and increase the potentials of sociability and similar things and oriented the students to the do creative works which makes them more skillful to find their way in the vicissitudes of their life in the future. As Seif (68) the major duty of education activities creating ability for problem solving and creativity in the learners and know and believes that other educational activities is requirements for achieve the creativity. therefore education is responsible for preparing a ground of growth and training of creativity and innovation and blooming of talents, abilities in creating new ideas and modern services for solving human community problems, for this reason, education attempt to apply and examine the tools like information and communication technology which could be able to do it's serious responsibility by efficiency and effectiveness. .in the way distance between training environment and traditional training methods and complaining between teacher and students with training environment by computer aid in various forms, like different kind of teaching game software's to its extensive forms, information &communication technology ,the necessity of more attention to the individuals and it's training in the community

Consequently, the study and research in the field of information& communication technology and its role at training of individuals creativity is was esteemed crucial matter.

"Importance of information &communication technology application (ICT) IN TRAINING

Information &communication technology during short time have converted to basic composing components of modern community. Now, most of the countries along with reading ,writing ,calculating

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,perception of information &communication technology and mastering on skills and concepts of information &communication technology as part of central core of education has been considered. One of the comprehensive objectives of UNESCO,IS guarantee of availability all developed and developing countries, the best facilities of teaching that is needed for preparation of adolescence in order to play role in the modern community and participation in creating an awakened nation.

The new application of information &communication technology like email, internet& world wide web, video conference, has provided various communication foe schools.

At the class which students have access to the internet, communication outside of the school could be provided a perception beyond a culture and around environment. Through engaging of students in common team work, have converted the class room to comprehensive and creative, the capacity and ability of ICT is useable for every students with every amount of ability. In fact could be increasing the itself skills in the field of relation between individual and creativity. ICT has provided a setting of instruments for students. After mastering the technical points, technical assignment and teaching activities present them in more creative, interesting, and joyfully form, and gives to the students a suitable instrument for the growth of creative thinking skills.

Of course teachers must be had the sufficient preparation in order to performing progressed program of information &communication technology, especially in the performing of curriculum of information &communication technology should be considered more attention.

The literature of training researches have showed that professional development program of teachers ,if coordinated with information &communication technology development stages ,would be more useful and effective . Teachers should be entered the information &communication technology at all aspects of their professional life to improve their learning and also students then here by lead to increase their selves and students learning.

ICT role in aid learning of students

ICT may be contributed to students in learning process through some way. For instance with providing delete and adding to the texts for students in a way that ,was not possible in the traditional methods ,in a way and the opinion of some of the thinkers, this method of working encouraging students to think about their work ,provided their mind distant from text also in the producing of content cause to promotion of participated learning in students . Computers also could do the repeated assignment (e.g., computation) more rapidly, and efficiently than human .then allocated the time of students to focus on the high recognition skills. ICT in education and generally at the community, with the application of internet and encyclopedia, has provided all-time accessibility to the information related to the most various topics for the students. The counter elation and immediately feedback are the other benefits of ICT at the class. at the finally make possible the easy extended learning from the class room to the home .the conventional application of ICT in the class as following :

Using of internet for collecting of information, using mutual relation tableau in teaching for all class room and application of cooperative learning systems.

Creativity definition

Scientist has demonstrated the creativity with various definitions. Then any definition is one of the important dimension and derivation of creativity.

In the not so long of the past, sometimes the creativity are counted as madness and mania .but in the pass of the time the viewpoints changed in the positive direction.

..rolami has pointed that creativity processes is not reasonable ,but meta rational and reasonable .this processes bring togheder the passionate and voluntary mind full activities and make movement . he believes that creative thinking, present the highest degree of emotional health and demonstrate the sound minded individuals during the improvement and self-evolution process.(GHasem zadeh ,1994).

Gilford, is knowing the creativity the collection of abilities and features which is being caused creative thinking,(hosseni ,1378)

Estephan robinz (1991) is expressing the creativity as meaning ability in combination of ideas at an unique method either create consistency between ideas.

Torrens knows the creativity as deep looking, and get out from the closed doors .from his view point, creative thinking is the sense of difficulties , problems, different views about the fault ,factors ,objects such matters ,propose hypothesis about the shortages ,examination and assessment of this guesses and hypothesis and would probably re amendment and experiment of them and consequently make interconnection of results .results of creative thinking skills should be was known as compatibility and adaptation skills.

Such skills should be considered as necessary and basic need for curriculum of the schools, families, and industrial and other institutions

,Sternberg (1989)Knows the creativity as combination of innovation power, flexibility and sensitivity in front of viewpoints that make learner to think about different innovative results out of unreasonable results that it's output is personal satisfying and would probably others (kefayat 1373).

Creativity definition through psychology approach

Creativity is one of the main aspects of thought .thought is a process of rearrangement or information change of achieved information in long term memory .thought consist of two types:

Convergence thought: Convergence thought as follow the process of information rearrangement and remaking and the existed achieved symbols in the long term memory.

Divergence thought: Divergence thought as follow the process of new arrangement and combination of information and achieved symbols in long term memory , creativity means Divergence thought:

Factors and conditions influences the creativity

Creativity is growing under the special condition, In order to materialize the creativity, is needed to some special condition as information, motivation, self-esteem and dream. (Mir gheydari 1382-83)

In time access to information ,is one of the main factors of creativity and it's crude matter .if we know the one polar of creativity as mind related activities ,other polar of would be knowledge and information from objects and affairs .in fact creativity is skill that connected the sporadic information.

If we suppose that creativity have two internal and external factors .whatever the internal factor, mean thinking flow to be completely and rapidly, the product of creativity is more enrich. in regard with external factor ,how some the individual has more information for the combination and connecting of his current awakening with last experiences ,would be more creative .whatever it's information sink to be more enrich, then with providing the mind factor ,the individual creativity has increased.

. People who more motivated to do things and progress, are more creative. Therefore, the conditions must be provided that motivate and increase people's creativity. At the other hand, individuals who have more self-esteem, in confronting with various affairs. Also they have more purposeful determination and approaches, and present them without scares and mistakes .Rogers points out that the main reason for the suppression of creativity, is an environment that lowers the level of confidence.. Anxiety is one of the major factors hindering the flow of creativity.

Because one who have anxious could not deal calmly with the affairs. Anxiety banned him to do concentration and thought .at the time of imagination, person out of the current and conventional bound and frames imagine what tends to think in his mind freely, since in most of the cases, innovation comes from the comments of fiction. Imagination is one of the important factors to provide a creative environment. Creativity occurs in conditions that are less critical to the endangered person and is less dependent on others; who is not reprimanded for explicitly talking not is punished for this behavior.

Offering rewards for participation in examinations, unsuitable punishment, does not allow to the learner to emergence of creative innovation (rohollah 1372). Evaluation circumstances judgment about how they apply to students is considered a very important point.

. For example, Mido has done research that shows that applying the "delay in judgment," replied the good production has nearly doubled. (Khan,zadeh ,54-1353).

With Using the 'judgment in delayed "students have more opportunities to express their views to be interested in the subject. Due to the above mentioned research results, since people need to be mentally creative mind, strong self-confidence is creative. Punishment, intimidation -mental stresses are the barriers to creativity growth.

Creativity in education

In recent decades many researches carried out by the researchers in the field of creativity .the conducted Researches in the Field of education, generally reached to this conclusion which education of creativity is possible.

Torrance writes: During the fifteen years of experience and training in creative thinking, I have seen evidence that shows that creativity can be taught.

Feld Hussein and et.al says: The answer to the question of "Can creativity be taught?" Is positive. They present Interesting ways to provide training for their creativity. Researchers have shown that all humans have a creative force: some have a greater creativity in one area and some in other context. Creativity can be blossom by teachers or destroyed by them .Thus, the favorable environment for the growth of student's creativity strength should be provided.

In Carl Rogers writes in this field that: "It is clear that creativity cannot be created with the pressure, but it should be allowed to rise. As farmers cannot bring out sprouts from the seed, but can provide favorable conditions for grain growth. The same situation is true for creativity. In order that must be provided a favorable background for the development and growth of children and students creativity. Among my experiences in psychology is that which could with providing the mental safety and freedom, the possibility of constructive creativity increased. (Motahhari, Mohammad Reza).

It is clear that anyone could be creative in the particular field. Could not expect anyone had creativity and innovation in all of the fields. Should identify these fields and backgrounds and provide the growth field of them.

The teacher's role as the director ICT to the direction of creativity

Concerning that most of the investigations has emphasis to the teacher's role in the growth and development of student's .but many of the teachers do not welcome to this opportunity .some believes by coming the information &communication technology to the fields of education, the role of teacher gets fade while teacher could act as a director of ICT flow toward innovative thinking.

The creativity trainer of teachers, beside of their positive attitudes rather to dynamic creativity, with show interest and respect establishing deep relation with, learners, enhanced the dynamically among them. These teachers not only annoyed from other's criticizes, but also encouraged them to express their comments and criticize (shahraray, 1372).

Teachers for the training of creative students first must be creative in the teaching methods. And give present the imaginable patterns through new teaching technology to expose them to students. Respectful teachers for being creative, should increase their theoretical information and knowledge in the field and topics of creativity .promote the mind based founding's about philosophy of education , and follow the teaching targets based on the extreme targets of education. "They should give the" creativity "in the top of the training targets. and conducted the teaching –training process with new approaches of creative training which either to meet creative teaching or provide creativity background for students .of curse the relations between employees of schools also has to be considered. Schools with open atmosphere, and friendly cooperation and participation of the members, and ruling of democracy to that, the way of member relation, lead to providing many of the effective factors on the creativity.

At the result, students take respect ,and gives them mental freedom ,mean freedom for seeing ,hearing ,imagination ,thinking and so on and many of the creative individuals features ,as curiosity ,criticized thinking and self-esteem were trained in the schools(Ysghmayi,1375).

Scope on the methods of creativity creating in the students

Teachers using different methods for promotion of creativity. The mathematic department in its research pointed out at the following:

1-introducig and presenting new and innovative field for the research, which started with specific situation not with particular task

2-providing the condition of discussion and view exchanging among the students, then the discussion directed to the interested issues of students.

3-discuss the questions which lead to enhance divergence thinking in the students .for example instead of this question that what is the earth gravity? Or define the gravity that is better questioned if there is not gravity what a problems become to human?

 4-we should be allow students freedom in the presenting solutions at the

Questions presenting .teacher should let the students continue to ask questions till substituted with new direction.

5-incourage students to take risk in the presenting likely solutions.

6-avoiding to apply in competency words an assaulting to students because of their incorrect replies.

7-freedom of statement in the schools and class is the main basic of creativity growth. The crackdown environments kill the curiosity and creativity in the students.

8-showing the movies which characters act to create creative behaviors .creative behaviors is effective in the encouraging of the students.

9-permitting to students in order to participate in each other ideas.

Index features of creativity

Generally, creativity assigned as in the area of "tendency" but a category in the field of "ability". The witness of this declaration is the works of students specially painting and their workman ship in the ages of pre-school. Children have willing to do innovative works in these ages. In the application of colors, drawing the figures and images, making workmanship are completely creative and like to realize their

beautiful mind pictures, these children, in the upper ages, when continuously exposed to the advices of elders for do or not do of action, and see themselves with barriers of educative prescriptions, change their tendency and try to zoom on the pre-built targets of elders and realize that targets.

In order to providing the fields, tendency to the achieve of three type of ability should be existed as following.

1-combinational and production ability. Means the ability to combination and production, this is the primary needs of doing innovative works

2-anlatycal ability .in fact that is the part of the criticize thinking ability, the individuals who have the analytical analysis, they can analyze and evaluated the ideas, and take benefits of this ability for creating new ideas.

30-practical ability. This ability is refer to ability to translate of theory to action, means to making of objects or creating phenomena's with intact ideas

For being creative, creating harmonization among three mentioned ability mean ability to combination, analytical ability and practical ability is necessary.

Every type of imbalance or disqualified of some abilities never lead to creativity.

The art of teacher is to take into account the growth of all three ability in the students, as harmonically and synchronous. And providing the fields of all three type growth for them, and students should be could put near side all the learnt ideas and realizations. And achieved the new knows through the known's and unknowns.

Conclusion

This is clear that for training of creativity in the individuals. Should be recognized the conditions that cause to better creativity. In this purpose, should be awareness from creativity fields sufficiently .why is tried to promotion of creativity, used from information and communication. Should be said that, it seems that   ICT has a nature which provide the condition lead to creativity. One of the main features of creative individuals is that make connection between different information and experiences and through this way achieved to the creative thought .information and communication technology could be provided various information for the persons. If the persons could establish suitable relation between the concepts of information, at that time they can show their creativity. And one of the reasons that ICT aid to creativity training. Is that judged about the individuals? Is not reprimanded for his faults, then the current of view presenting is not crack down. At the other hand, ICT has an entity interaction .being informed from others thoughts ,discussing and give view point could be make sparks in the minds which lead to growing of creativity .then education with the aids of this technologies including computer with unique features as high level interaction of learner with learning environment   while learning and mental security feeling and consequently creating confidence atmosphere to the learner could be bring out the suitable atmosphere for the growing of creativity.

Specially if the education software was produced according with creativity psychological standards as high level interaction of learner with education environment, existing variation in the

Selection of level and learning methods and sufficient enrichment scientifically, could be bringing good environment for growing of the creativity.

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