The Implications of Improving Innovation & Creativity Skills on Students' Academic Achievements in Primary Levels

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Abstract: The origins of creativity were not as many assumed beginning ten years ago, but instead over one hundred thousand years ago basically during the Paleolithic age. According to Wilson (2018), the origins of the concept of creativity illustrates the way by which humanities, spurred on by the language's invention, while played a major role in the process of defining our species. Creativity is still attracting our attention, while at the same time making us figure out what are the benefits beyond it and what the challenges may be faced to promote it, in particular during education stage.

This research paper articulates an in-depth study on the implications of innovation and creativity in improving student's achievements, basically in primary levels. Problem statement, question of the research, aims and objectives, methods and methodology will be stated in the following chapters. The main concern of this study is figuring out whether we can support or not, the idea that creativity & innovation help student in their academic achievement.

1. Introduction

The creativity's ordinary nature and as well as this global acceptance of its creative significance have made it such a key characteristic of all the world's citizens basically in such knowledge-based societies. The importance of creativity is centered on improving the achievements of students while at the same time accelerate their progress.

Despite of the extensive researches on the perceptions of teachers on innovation and creativity along with their promotion, still there is a specified gap in the actions and behaviors of teachers in promoting them. Moreover, the chosen measurements and feedback to evaluate the students' achievements based their creativity are still puzzling the education researchers. Some are calling to assume approaches of learning via games, while others are calling to leave students freely to select their best technical tools to assist their creativity and education performance respectively.

However, the main challenge is preparing students for their real world challenges, which they may encounter in their society and work. Employers changes

their perceptions towards employing graduates while choosing new concepts in hiring them based creativity and innovation. Sometimes creativity and innovations are ignored in the educational system, whereas students after their graduation may find out difficulties in coping with the requirements with their employment. In order to overcome such issue, this paper will discuss the importance of creativity and innovation in the students' academic achievements that in turn will help them in their future employments.

The specified research question is "*Whether promoting creativity among academic students can to greatest extent improve their educational achievements*"? From this main questions, there will be other sub-heading questions;

1. How can teachers and educators help their students in promoting their creativity to improve their academic achievements?

2. What are the measurements and technical tools can be the focus in order to link creativity of students with their educational achievements?

3. What are the recommendations for better educators-students relationship based promoting creativity and better academic achievements?

2. Literature Review

While speaking on the uprising of creativity in education, many authors appreciated its importance and reflection of the main factors of the process of education. (Hatamleh, 2015). In fact, creativity is considered as a critical factor in the progress of the nation, while its reflection of educational process is highly illustrated. Creativity in fact, became the main language of the current era, basically after the process of transforming the psychological and educational scientists' interests from mere studying the talented students to studying those creative ones, while at the same time finding out the factors, which contribute in such creativity. Moreover, one should pay attention to the major roles played by educational institutions and universities in promoting and developing the capacities of students in innovation, creativity, originality, novelty, elasticity and most important scientists' creativity. Settling upon those facts, Hatamleh (2015), recommended the necessity of creative revolution in all stages of education, considering its major role in the process of solving the social problems. While shedding the light on the importance of creativity in improving the performance of students, there is a critical question regarding whether teachers and educators are interested in promoting innovation and creativity among their students, at the aim of improving their achievements.

In Greece, Knostantinidou & Zisi (2017), performed a study on whether physical educator promoted the creativity of their students. The aim of their study was to delineate the actions and behaviors of teaching basically, when teachers

attempted possible ways to promote their student's creativity in the class. This study focused on exploring the Creativity Fostering Teacher Behaviors (CFTB) checklist while depending on this theory of Cropley (1997) who assumed which behaviors should be demonstrated by teachers in order to foster the creativity of their students. Hence, the authors developed such CFTB through a method of content validity, which has been accuracy tested for interrater reliability that in turn, has been admitted to be satisfactory. The authors therefore, observed around 30 physical educators (PEds) twice, basically during the lessons of PE in which they targeted to foster the expression of their student's creativity. However, PEds could be just expressed the minority of their creativity fostering actions and behaviors, in particular those collaborated with the process of encouraging the learning responsibility, such as autonomy's enhancement and social integration during the processes of learning. Moreover, the authors observed the absence of the improvement of flexibility, on the contrary, which is a top indicator of achieving creativity denoting the student's divergent thinking and most importantly, the positive management of frustration and failure that could diminish the students' emotional barriers and as well as inhibitors of such creativity, during such observation. Similar thing occurred for some indicators, including the chances for deviation, the absence of rush and as well as criticism delay on the suggestions and ideas of students, added to the entire other indictors on CFTB checklist. The authors consequently, discussed the misalignment of theory into practice regarding the creativity fostering actions and behaviors of the teachers. They found possible elements linked to such inadequacy, including the lack of training while the curriculum itself could perhaps limit PEds from teaching for the process of creativity. (Knostantinidou&Zisi, 2017). Settling upon the importance of promoting creativity and the role played by teachers and educators to promote such valuable concept among their students, still we have to figure out which measurements tools should be taken in evaluating creativity and what techniques must be considered to improve their achievements based their students' academic education.

Wu, et al. (2012), clarified the importance of using concept maps in assisting students in the process of organizing their information and knowledge, while at the same time assessing their information structures widely based many academic subjects. However, some issues may appear while using the concept maps in education, such as the time consumed by teachers to evaluate the concerned concept maps, which have been developed by their students. Hence, the students may find difficult in receiving feedback on timely manner from their teachers, that in turn, may influence their scheduled learning and affect on their achievements. Therefore, Wu, et al. (2012), suggested a learning strategy focusing on a computer based concept map oriented basically with proposing a real time evaluation and

feedback, in order to overcome such challenges. This approach offered instantly assessment of the concept maps, while giving a real time feedback to the concerned students. Therefore, the authors conducted an empirical study to assess this new strategy's effectiveness compared to the appropriate computer based concept map approach. The outcome revealed that. Such innovative approach could be beneficial in promoting the achievements of learning of those students and their attitudes of learning.

Hwang, et al. (2014), conducted a study while proposing a peer assessment-based game development approach, in order to enhance the student's achievements, problem-solving, and motivations skills. The authors conducted an experiment to assess the efficiency of the assumed approach basically, in high schools. The participants were 167 students based 6th grade, while 82 of them were basically assigned to such experimental group and as well as learned with the specified peer valuation based game development approach. 85 students were respectively in the control group while were learning with an appropriate game development approach. The results revealed that, the assumed approach could efficiency promote the achievements of the students' achievement, problem-solving skills and learning motivation, while their perceptions of using the suggested educational computers game. In addition, the results illustrated that, most of the perceived peer assessment based game development of the students could be seen as the effective and efficient learning approach that in turn could assist them in the process of enhancing their status of deep learning based "in-depth thinking", "motivation", and "creativity".

In line with the previous study, and critically when considering the gifted and talented students, Ziadat& Al Ziyadat (2016), conducted a study to determine the efficiency of a suggested training program focusing on six hats model in the process of developing the skills of creative thinking and the academic achievements of Jordanian students in Arabic languages. The sampling of the experimental study included 59 talented and gifted students of their 7th grade based the school of King Abdullah II Elite, in Jordan. The authors assumed developing a training program focusing on Six Hats Model. The participants were given a Torrance's B Test for the creative thinking, which has been developed by these authors mainly, developed for talented and gifted student's Arabic Test with the needed elements of consistency and reliability. The authors applied the statistical tools and analysis of the resulted data involving the analysis of Covariance (ANCOVA). However, their findings illustrated discrepancies of the statistical significance (a = 0.05) among the measurements and skills of such achievement test basically, in the favor of the participants. As recommendations, the authors called for training and rehabilitating the teachers on usage and apply latest technical methods in education, including problems creative solutions, Alcort program, brainstorming,

while refraining from the old used methods, which focused on retaining crammed data and information storage, disregarding of the student's active participants.

Surveying the literature and the available previous studies conducted by other authors on similar topic can obviously refer to the importance of creativity and innovation to improve the student's achievements basically in academic education. There are benefits from considering creativity and promoting such concept in order to assist students in their learning process and all their life's situations. However, still the researcher needs to confirm the aforesaid research question, *whether promoting creativity among academic students can to greatest extent improve their educational achievement.* Hence, the following parts will focus on conducting the empirical study, by which the matter will be clear in confirming the research question and the related hypothesis.

3. Methodology

According to the statement of Saunders, et al. (2012), we have two main methods in analyzing researches, the quantitative and qualitative. The quantitative focuses on conducting surveys and questionnaires, while the qualitative focuses on some methods such as case studies and interviews. The researcher selects to do the empirical study that is centered on the qualitative method. Hence, interview will be conducted with 12 teachers and 30 students based primary level. A consent letter has been submitted to the participants to confirm their acceptance of the participation, while having the freedom to answer or reject answering, according to believe and opinions. The participants will be asked some on focus and significant questions, which should be answered in details. The questions were designed according to the experience of the participants (teachers – students). These questions focuses on the participants' comprehension of the meaning of creativity and innovation, their importance generally and in particular to motivate students towards perform better, along with their implications on education and on students' achievements in academic stage. Finally, some questions were related to the issues and challenges of innovation and creativity and whether serious solutions could be taken.

The answers will be recorded and transcribed to analyze the contents. In fact, the qualitative method is associated with the interpretivism philosophy while at the same time focuses on inductive approach. (Saunders, et al., 2012).

As to the specified variables, we have two; the independent (creativity & innovation) and the dependent (the students' academic achievement). To explain that, when creativity and innovation are high, the students' academic achievement will be high respectively, and the vice versa.

Initially, the researcher decided to estimate that each interview could not exceed forty to fifty-five minutes. The interview is insisted to be conducted after classes to get flexible and freely opinions of the participants.

Meanwhile, as soon as the researcher obtains the full answers, they will be recorded and transcribed, while analyzing the results will facilitate the process of answering on the research questions.

4.   Analysis of the Results

The researcher collected data from the participants, both teachers and students, and recorded their answers, transcription has been arranged and analyzed in order to get more information on the subject and additionally, to be able to select the convenient hypothesis and answer on the questions of the research. (Ghauri&Gronhaug, 2005; Creswell, 2009; McMillan & Weyers, 2010; Wilson, 2010; Saunders, et al., 2012).

From the answers of students and teachers of the specified questions, most of them recognized the importance of promoting innovations and creativity to improve the students' academic achievements. However, some of the students who were participating in the interview complained that, their teachers either ignore their talents or even not concerned in motivating them. This shapes one serious issue in promoting the process of creativity and innovation among students in education. Some teachers commented that, the measurements of promoting creativity and innovation in education were absent or even might be traditional ones. Overall, the teachers recommended to use latest technical tools in measuring the standard of creativity and innovation among their students and as well as in promoting them at the aim of improving their academic studies and later in their future working. This is in line with the comments of Graf, et al. (2010) and Jamal & Shanaah (2011).

In general, from the obtained answers from both students and teachers, the researcher can conclude that, promoting innovation and creativity can be considered valuable tool by which the students' academic achievements can be improved. In other words, there are links between enhancing the standard of creativity and innovation promotion among students with their achievements, either during studies or later in the future. Such results are corresponding to the outcomes of Yefim (2010); Wyke (2013); Lubart, et al. (2018) and as well as McCaffrey (2018).

Consequently, the study has an outcome of answering on the main research question "*Whether promoting creativity among academic students can to greatest extent improve their educational achievements*"?. While assuring that, the idea that creativity & innovation can help students in their academic achievement and that, promoting creativity & innovation among academic students **CAN** improve their educational achievements.

5.   Conclusion & Recommendations

The study discussed the importance of creativity and innovation along with exploring its origin. The main question of the study was, *"Whether promoting creativity among academic students can to greatest extent improve their educational achievements"?.*

In order to answer on the specified question, the researcher surveyed the previous studies, which have been written by other researchers on similar topic. Picking the thread from the literature review, the researcher conducted an empirical study based on qualitative method. The interview was chosen in order to get extra details. The outcomes revealed the importance of motivating, encouraging students in achieving their academic studies with extra success by promoting their innovation and creativity using highest technical tools.

The study while answering on the research question and supporting that, promoting creativity & innovation among academic students **CAN** improve their educational achievements, can shed the light on this importance while adding value to the future studies.

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Appendix I
Questions of the Interview

For Students

1. Do you understand the benefits gained from encouraging innovation and creativity?

2. Do you consider yourself innovative and creative student?

3. Please explain the way by which creativity and innovation can add value to your skills and experience.

4. How do you think that, promoting innovation and creativity can improve to greatest extent your achievements based your academic studies?

5. Did you face any challenge concerning promoting your creativity and innovation in classes? Please explain in details.

6. What are your suggestions to achieve highest marks in your academic studies based on promoting your innovation and creativity by your teachers?

For Teachers

1. Can you from your wide experience in teaching, explain the benefits gained from motivating your students to consider creativity and innovation in enhancing their performance.

2. How do you consider that, your students are creative and innovative?

3. What are the measurements by which innovation and creativity can be promoted in classes?

4. What are the problems in promoting creativity and innovation in educations?

5. What are the suggested solutions to overcome the obstacles of creativity and innovation generally and in particular in education?

6. Do you recommend to consider promoting creativity and innovation among your students, in order to improve their academic achievements?