



Science, Movement and Health, Vol. XVI, ISSUE 2, 2016
June 2016, 16 (2): 209-215
Original article

THE EFFECT OF USING THE SIX THINKING HATS STRATEGY IN TEACHING HEALTH AND FITNESS COURSE ON THE DEVELOPMENT OF CREATIVE THINKING AND THE ACADEMIC ACHIEVEMENT LEVEL

MOHAMED Amal Salah Eldeen¹, AHMED Eman Maher¹

Abstract

Aim. Creativity is a multi-faceted phenomenon, includes a new production and in the evening, which is consistent with the primary objective of education in this day and age, a graduate learners capable of innovation and creativity and uncover new, to create a creative and innovative thinking at the time of the change pattern. The aim of this study was to investigate that Effect of using the six thinking hats strategy in teaching health and fitness course on the development of creative thinking and the academic achievement level.

Methods. (76) Female student from faculty of education-grade one, divided into (2) group. The experimental group (n = 37) performance the six thinking hats strategy and control group (n = 39) performed traditional learning. The parameters were collected before and after (10) weeks. Subject's parents and teachers were required to read and informed consent document; there was no history of injuries, diabetes or recent surgery. statistical analysis of the results was carried out with the use of SPSS software.

Results. The experimental group had significantly higher than control group in Torrance Test of Creativity Thinking, and the experimental group had significantly higher than control group in Test of academic achievement.

Conclusion. Under the condition of our study, using the six thinking hats strategy to ten week has beneficial effect on teaching health and fitness course on the development of creative thinking and the academic achievement level for university female students.

Keywords: Functional Training, Handball players

Introduction

Education is the most important modes of human societies in the transfer of the heritage society and directing his energies and social adaptation, a process of comprehensive sense of the individual in order to prepare the human acquire skills, values and attitudes and the different patterns of behavior that make him a good citizen in the community. (Birbeck, 2010)

Traditional education does not go with this knowledge of momentum but stand helpless before the challenges of the times. With successive and sequential changes in the modern era, and any new information revolution in all fields has become more difficult the necessary knowledge needed by the human appreciation. Therefore, necessary to the emergence of contemporary educational trends, which recommends the adoption of modern learning strategies that, will learn the appropriate thinking, which enables the learner to deal well with these developments. Moreover, as much as possible to take advantage of these changes skills. (Guilford, 1988)

In addition, it brought modern education emphasizing the importance of thinking and development, through the emphasis on the interest of pursuing the best strategies for education and

training for learners to build thinking and to practice his skills to become able to cope with the demands of life to achieve the goals and objectives desired. As has become the ability to think of the main goals of modern school. (Ransom 2008)

Scientists, educators and refers to the existence of many of the thought patterns including: critical thinking, and deductive thinking, thinking contemplative, visual thinking, creative thinking, and systemic thinking, etc.

Creativity is a multi-faceted phenomenon, includes a new production and in the evening, which is consistent with the primary objective of education in this day and age, a graduate learners capable of innovation and creativity and uncover new, to create a creative and innovative thinking at the time of the change pattern. (Sherrie, 1994)

Which necessitated the educational system that characterized by creativity and adopts exploratory means rather than an exposition that focuses on understanding and application rather than conservation and interested in the development and the formation of personal and creative development of creative abilities.

Where that creativity is the ability to generate ideas, use potential, and employ imagination form ideas and new things unfamiliar

¹ Faculty of Physical Education, Helwan University, EGYPT
E-mail address: amr297@aswu.edu.eg
Received 27.02.2016 / Accepted 03.04.2016



earlier. Which based on the acquisition of experience that form the base for her. and then the ability to examine these ideas and reformulated so that they become creative and original ideas and characterized as a result creative thinking any of those individuals that creativity is the emergence of a new production stems from the interaction between the individual and the gain from the experience.

Timmering (2009) see that creative thinking as a mental process that we use to gain access to new ideas and visions, or which lead to a merger between the previous ideas and organized by the mind in a creative way enables access to all the new understanding or new production.

Many scientific sources said that most creative thinking skills: fluency, flexibility, originality, sensitivity to problems, aware of the details, maintaining the trend. In addition, confirmed researchers and specialists in psychology and teaching methods that can develop creativity either directly through the design of special training programs for the development of creativity. Alternatively, using some of the methods and educational methods with the curriculum used any creativity. On the other hand, creative thinking should not be left to chance, to achieve creative thinking has to be followers of the ways, and strategies for teaching a creative process of learning is no longer aimed at providing learners set of knowledge, skills and attitudes. As much as intended to modify and change the comprehensive and profound behavior to become more able to invest all the energy and self-investment potential of innovative and creative.

The six hats are leading teaching creative strategies which are based on the use of creative skill strategy are of advanced technologies and with efficiency in terms of power and speed of the impact. In terms of quality, assurance in thinking it is a system of thinking constructively and effectively more productive and creative and helps the learners to adjust the paths their thinking through directed thinking.

Moreover, emancipate the mind of the typical monotony and traditional prevailing in the way of thinking and then directed to the specific pathways to activate the creative and developmental ideas. (Pal, 2004)

(De Bono) confirms the importance of thinking according to six hats strategy, saying it draws attention to the multiple facets of verbal and formal and learner using this strategy is gaining Thinking in face of positions. From several angles and dimensions are different, and that reliance on this strategy in meditation in attitudes or problems may convey learner of refusal and acceptance only to be expanded and integrated with other positions.

Moreover, add something or have deleted part of it to become more useful material benefit or spirits, as they contribute to ridding the learner's cons oriented thinking.

(De Bono) leading this theory as it is assumed that thinking can be divided into six caps meaning six different roles performed by the learner, and gave each a hat Luna reflects the nature of the user's thinking, where he sees that there are many different forms of thinking. and may not stop at one of these models, and choose any hat six thinking hats is from behind the goal of the learner is seeking to achieve. This strategy aims to develop exploration, creativity and initiative by giving each type of thinking right to express his point of view. In addition, by encouraging the parallel thinking and organizing information and guide the learner to think a certain way, and hats of the six is not a real caps but psychological caps, meaning that the learner can be the color of the colors of thinking and each hat connotation wears any of the six colored hats that represent each hat. White show information and data objectively, it refers to the search for information and the facts, and red Hat show feelings and emotions without logical justification, yellow hat refers to positive thinking and to highlight the positive aspects of the subject and generate constructive ideas while giving logical justifications. The black hat refers to negative thinking which stands out the negatives and the obstacles and shortcomings in the subject to be treated, green hat suggests thinking a creative show creativity and innovation in the sense that. When you wear the green hat looking for new ideas and solutions have never tread, and blue hat suggests holistic thinking and contribute to give a final judgment on the matter to take the necessary decisions. (Mary, Joanes, 2004)

De Bono also indicates that changing the caps mean that the learner to change the nature of his thinking from one stage to another also gives the flexibility of thinking. When changing learner hat it sees things differently, and different aspects of making it open to all ideas, and that if he wore a hat such as hat associates can feel and sympathize with him and understand his way of thinking.

Six Thinking Hats is the most successful programs because it allows the learner to think intentionally and involuntarily through the generation and evaluation of information. Think about the negatives creatively and turn them into positives can also think creatively in more positives he played roles proposed program gives the learner innovative, creative, and critical role and the exercise of thinking about sound and effective manner.

Hecerian, (2004) also emphasizes study and servant on the impact of the six hats in helping



learners to creativity and thinking in an orderly and standardized and that it provides comprehensive business thinking maps.

Six Thinking Hats aims to clarify and simplify the thinking in order to increase its effectiveness, and allow the learner to move or change his thinking style according to the situation faced by, and aimed at the development of thinking in all its forms and types and provide learners with positive ways to cope with various situations. (Cotton, 1997)

The importance of using modern improve thought processes strategies but on the way out of these operations as the measurement of the ability to think of learners of important things that determine in which the reality of our curriculum. In addition, the extent of the actual contribution to the development of thinking in its different forms and the extent of adoption of the teachers strategies and modern ways of working rates the growth of thinking to achieve basic education goals.

Based on the results of previous studies of the reality of the curriculum that has become plagued by overcrowding courses and inflation vast amount of theoretical knowledge, which constitutes a heavy burden rests with the educated. In addition, the impact on the teaching methods employed by teachers, lecture, and narrative content to accomplish quantum required the curriculum. and to study the methods of pre-existing students on conservation and recitations, and that the exercise of thinking skills account, leading to the general weakness of the level of students in achieving the objectives of the targeted approach and show here the large gap between the targeted approach. and approach the investigator is not the distance still vast between these curricula and teaching methods and what we are seeking.

In spite of the efforts made in the field of teaching methods and methods of teaching remained constrained by notions prevailed in the past, as we find a lot of educated people are still focused on the traditional methods rather than focus on activating the participation of the learner in the learning process.

In addition, that the age we live in is witnessing great mobility intellectually in his introduction to improve the teaching and development. Moreover, the use of educational technology, educational methods and the best it has become the goal of public education is to teach learners how to learn and to overcome the problems that the educational orientation and education that should be addressed through the teaching and learning processes.

Given the nature of the phase in question and considered an important stage for the development of scientific tendencies among

students and so as it represents tendencies. Especially in the areas of counseling and guidance school in determining, the future course given the importance of the urgent, need among students this stage to learn the kinds of thinking works to remove barriers to have. In addition, encourage them to initiative, flexibility, and the transition from a specific type of thinking to another type, including the nature of the educational situation requires. Moreover, as the results come back positive largest, opening horizons of thinking front of them will help them to cope with learning difficulties and attitudes that need to make a decision. (Salih, 2010)

Focus on the use of specific action strategies to help students on the methods of correct thinking and training on the development, which leads to raise the level of scientific attainment on the one hand.

The use of these strategies in the future positions of the other, and these strategies put forward to improve the process of thinking and development Creative thinking, six hats strategy and that teach students how to move flexibly from a position of education to another. In addition, always look for alternatives, and improve thinking, which is reflected on raising educational attainment level to have and develop tendencies and realize the link between what is taught and what is applied in real life.

Therefore, The research scientific try to identify the impact of teaching using caps strategic thinking six for the development of creative thinking, and the development of creative student's ability to create a creative generation capable of invention and solve problems and adapt to and participate in the development and progress of society. Moreover, on the level of achievement of students in the health and fitness items.

The aimed of this study was explore and identify the impact of the use of the six thinking hats with the decision of the health and fitness strategy on the development of creative thinking skills (fluency·flexibility· originality) for the students of the first band at the Faculty of Education at King Faisal University. With the decision of health and fitness at the level of academic achievement for the students of the first, band at the Faculty of Education at King Faisal University strategy. In addition, recognize the correlation between creative thinking and the level of academic achievement among student's skills.

Samples

(76) Female student from faculty of education-grade one, divided into (2) group. The experimental group (n = 37) performance the six thinking hats strategy and control group (n = 39) performed traditional learning. The parameters



were collected before and after (10) weeks. Subject's parents and teachers were required to read and informed consent document; there was no history of injuries, diabetes or recent surgery.

Torrance Test of Creativity Thinking:

The Torrance tests separately measure aspects of creative thinking such as fluency, originality, and flexibility. In the sample verbal subtest document, test takers are told to write as many questions as they can about the picture that was given. Scores are given for fluency, flexibility, and originality for the questions. In measuring fluency, administrators can ask an individual to think of as many different solutions to a problem as possible. The more solutions a person can find, the greater his or her fluency. Originality is evaluated in which a test maker attempts to evaluate how new or unusual a person's solutions to problems are. Flexibility is measured in terms of an individual's ability to shift directions or to try a new approach (Kaplan, 2005). The Torrance Test of Creative Thinking measures divergent thinking; it has both verbal and nonverbal forms. Both forms are times and scored for fluency, flexibility and originality, which are all qualities defined as aspects of creativity. The Torrance test is the most widely used creativity test of the divergent thinking type. Much evidence of validity also supports it and it consists of a few decades of research that have established its substantial degree of reliability (Starko, 2010)

Test of academic achievement:

The researchers prepared achievement test for material health and fitness according to the following steps:

- Steps to build the test:
- The objective of the test:

The test is designed to measure the academic achievement of the students in the health and fitness article in the subjects to be taught the content in question.

- Outline of the test:

In the light of the objective of the test was limited to the main dimensions contained in the proposed content of the article using the six thinking hats strategy intended to measure the achievement of students to determine the main dimensions (themes) and phrases after all. It has been introduced topics article covered by the test on the number (10) experts in curriculum and teaching methods in order to express an opinion on issues. Goals and cognitive desired achievable and measurable, a proposal is in addition to, or delete it. In addition, the percentage of agreement between them (100%) to identify critical relative each of the key dimensions (article) topics.

- Test dimensions:

The researchers select test questions in light of the relative importance of the main dimensions (article topics) in this step is determining the number of specific questions and after that make up the test as it measures the cognitive achievement of students in the first year following subjects level:

- Health and levels
- Fitness
- Textures
- Nutrition
- Weight control
- Infectious diseases and non-communicable
- First aid

Statistical analysis

All statistical analyses calculated by the SPSS statistical package. The results are reported as means and standard deviations (SD). Differences between two groups were reported as mean difference $\pm 95\%$ confidence intervals (mean diff $\pm 95\%$ CI). Student's t-test for independent samples was used to determine the differences in Test of academic achievement and Torrance Test of Creativity Thinking between the two groups. The $p < 0.05$ was considered as statistically significant.

Results

Table 1. Anthropometric Characteristics of the Groups (Mean \pm SD)

Group	N	Age [years]	Weight [kg]	Height [cm]
Experimental	37	19 \pm 1.9	65 \pm 2.9	165 \pm 3.1
Control	39	20 \pm 1.2	63 \pm 3.1	164 \pm 2.2

Table 1 shows the age and anthropometric characteristics of the subjects. There were no significant differences were observed in the anthropometric characteristics for the subjects in the different groups.

Table 2. Mean \pm SD and "T" Test between two Groups (experimental and control) in Test of academic achievement

Variables	Experimental group		Control group		T test	Sign.
	Mean	SD	Mean	SD		
Health and it levels	5.71	\pm 0.66	3.62	1.18	10.44	S
Fitness	5.70	0.57	3.55	1.13	11.40	S
Textures	5.10	0.56	3.35	1.25	8.42	S
Nutrition	1.58	0.33	1.08	0.27	8.88	S
Weight control	3.71	0.43	1.86	0.74	14.72	S
Infectious diseases and non-communicable	8.35	0.85	4.41	1.14	18.73	S
First aid	8.45	1.36	4.06	1.19	16.59	S

Table 2 shows significant Difference between experimental group and control group in all variables the Test of academic achievement for the experimental group

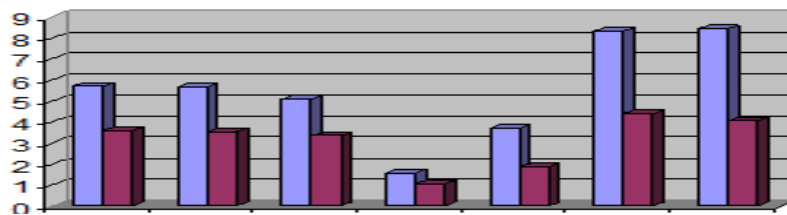


Fig 1 shows the differences between the two groups (experimental and control) in Test of academic achievement

Table 3. Mean \pm SD and "T" Test between two Groups (experimental and control) in Torrance Test of Creativity Thinking

Variables	Experimental group		Control group		T test	Sign.
	Mean	SD	Mean	SD		
Torrance Test of Creativity Thinking	70.71	\pm 5.66	55.62	6.18	16.75	S

Table 3 shows significant Difference between experimental group and control group in Torrance Test of Creativity Thinking for the experimental group

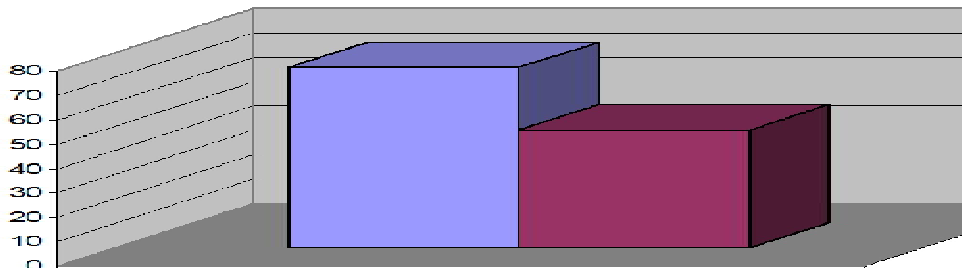


Fig 2 shows the differences between the two groups (experimental and control) in Torrance Test of Creativity Thinking

Discussion

This study assessed the effects of 10-weeks using the six thinking hats strategy in teaching health and fitness course on the development of creative thinking and the academic achievement level.

The results indicated that the experimental group higher than the control group in creative thinking and the academic achievement level.

The six hats of advanced international technology strategies and its effectiveness, strength and speed in effect. As well as the quality assurance of thinking. These innovative strategies (De Bono): "The Six Hats system Thinking is a system of thinking is very easy but effective, constructive and more productive and help everyone to adjust paths thinking they have to reflect on the quality of their performance. In



addition, works six hats strategies to guide thinking and emancipate the mind. The monotony of the typical and traditional prevailing thinking and connect it to a high-quality tracks. (Mishra, Koehler, 2006)

Kenny (2003) constant with the results and indicated that "de Bono" selection the hats based on

1. The hats are closest to the head, and the head contains the brain, which is the function of thinking.
2. Hat usually do not stay long on the head because we quickly change it, change the circumstances, and so ideas, they admire
3. The idea that at a certain time, and abandon them later hat that cannot we wear for a long time, as well as
4. The idea should not live long we have.
5. Hat worn long and dirty look trendy, as well as the idea that they remained over a long
6. Hat symbol of the role
7. Human needs different colors of thinking, to explain his style of thinking and new situation in front of him

Therefore, human thinker needs to wear several different hats for thinking, creativity and criticism. Thinking in a linear path and each station identified by a specific color and the reason for this is because the hats worn on the head

Hecerian (2004) indicated that the head is the place thinking, and the goals of the six hats to think about include:

- Transition from thinking and occasional randomness.
- Simplification and clarification of thinking to achieve greater efficiency.
- Organizing information.

Mary and Joanes (2004) indicates that attention to teach thinking and development work on the development of mental capacity when the learner to acquire knowledge and organization. Then employ them in various educational and life situations. Where it became the ability to good thinking are originally to do any work that is necessary lead to a reflection on his creation.

Theseresults confirmed by several studies (Pal, 2004; Ransom, 2008; Salih 2010; Sherrie, 1994), which focused on creativity, especially in the second half of the twentieth century, that individuals with creative capabilities play an important role in the development and progress of societies. In addition, that the progress and development process depends on the capacity and capability of different skills to the children of the community development and creative thinking is an

effective means for the development of any society and updated.

Conclusion

Under the condition of our study, using the six thinking hats strategy to ten week has beneficial effect on teaching health and fitness course on the development of creative thinking and the academic achievement level for university female students

Acknowledgments

Thank you to all of subjects who participated in this study.

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