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A study about creativity based science teaching of school students

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Abstract
Scientific creativity can explain itself in comprehending the new ideas and concepts added to scientific knowledge, in formulating new theories in science, finding new experiments presenting natural laws, in recognizing new regulatory properties of scientific research and scientific group in giving scientific activity plans and projects and many other areas. Present study is based on implementation of creativity in science teaching.

Keywords: creativity, scientific, visual teaching

Introduction
Education has a vital role in social, economical, cultural, moral and national development. At present, science and technology is growing very rapidly and created new possibilities of science teaching. Science education provides good standards for people and leads to multi facet development of society. India has 3rd largest scientific and technical man power in the world. Science teaching is a process containing the creative components affecting each step of life. Thus creativity is an important aspect of science skill.

The aim of education is self-realization of every individual which is aspired and achieved by students through creative presentation. Object of science education is to generate excitement towards science study, discover the evidence, and search reasons. To fulfill these objectives method of creative approach in scientific problem solving has not become widely used.

Creativity is the ability of a person for self-expressions, self-realization. Creative thinking is the seed of creativity. It is ability to create something new into existence. A person may have this ability as naturally or nurture it as a result of various environment impacts. Creativity is a potential which nurtures under stimulating environment. Opportunities for creative expression inspire, encourage and sharpen the creativity. Teachers, parents and society should promote creative approach. The creativity is recognizing the gap in the information, expression, testing and developing hypothesis and transmitting to other. It takes a complementary role in many scientific processes. With the help of creativity, science education may functional, easy, interesting and attractive. Science educators recognized importance of creativity in science education and started to work on methods, techniques and designs. Creativity includes theme presentation, song, poem, puzzle, drama, chart, poster, animation and model etc. Creativity can be promoted by providing enriched academic environment.

In present education system exam stress, so many subjects, overcrowded syllabus, method of conventional teaching, lack of proper material, doubt in scientific and mathematical concepts make education a burden rather than excitement and joyful. In this condition, many students leave science studies. Scientific creativity helps to create enrichment in academic environment through various tools as models, charts, documentaries etc. Students get an opportunity to learn subject in easy and interesting way.

Objective of Study
- To find impact of creativity based science education
- To compare the effectiveness of creative science education with conventional teaching method
- To find best creative method of science teaching

Hypothesis
The learning of students taught through scientific creativity will be significantly higher than that of those taught through conventional method of teaching.

Method
The experimental method was applied for present study. 240 students of class 6-8 were selected randomly for study. Students were divided into 6 groups and each group was consists of 40 students. A topic related to science subject was taught to all groups. Group A was taught through conventional teaching method while remaining 5 groups were taught using different creative methods. These groups were named as B-1, B-2, B-3, B-4 and B-5. Applied creative scientific methods were animation, working model, poster, puzzle and drama. All 6 groups were tested using same questionnaire. Obtained result was tabulated and converted into percentage for comparative analysis.

Finding and Analysis

Table 1: Effectiveness of Various Science Teaching Methods

Category ↓	No. of Learners Through Conventional Teaching Method (%)	No. of Learners Through Creative Scientific Teaching Methods (%)				
	Group-A	Group B-1	Group B-2	Group B-3	Group B-4	Group B-5
Applied Teaching Method →	Conventional	Animation	Working Model	Poster	Puzzle	Drama
Class-VI	37	74	71	61	62	59
Class-VII	41	76	74	63	63	61
Class-VIII	44	81	77	66	64	62

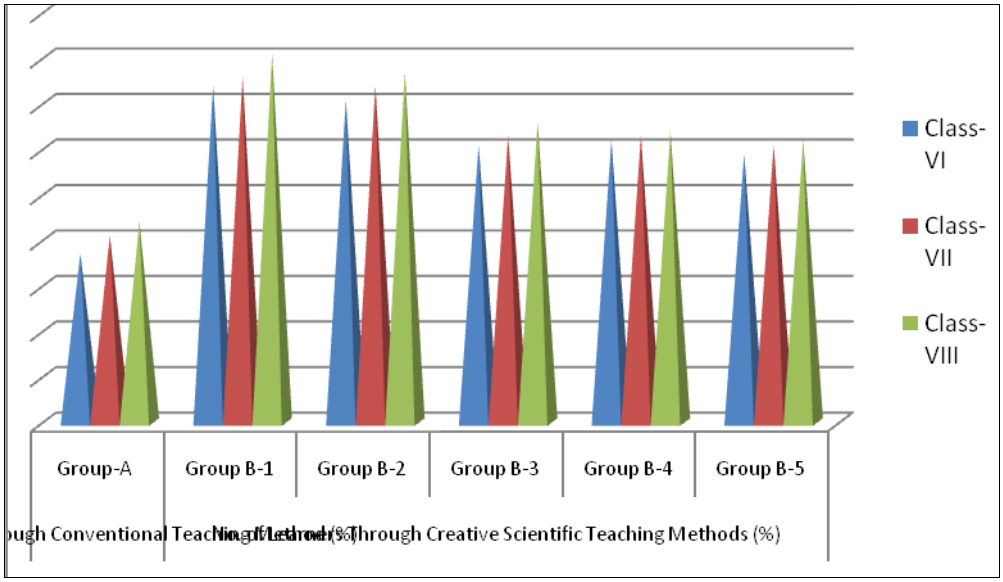

Fig 1: Effectiveness of Various Science Teaching Methods

Result shows that influence of animation films on student learning is highest at all levels. It helps to teach 81% students of class-8, 76% of class-7 and 74% of class-6. Teaching through working models is also effective way of learning. Students of class-8 learnt 77%, class-7 & 6 learnt 74% & 71% respectively. Poster making is also helpful in science teaching. 66% students of class VIII, 63% of class VII and 61% of class VI learnt through this method. Puzzles is found as important teaching method, it helped 62% students of class VI, 63% of class VII and 64% of class VIII students to understand subjects. Drama is also found as creative science teaching method. 59% of class VI, 61% of class VII and 62% of class VIII students learnt through drama method.

Conclusion

Visual teaching method as documentary is effective to transfer knowledge. It makes a remarkable mark in mind as it demonstrates the process. Study indicates that creativity catch attention, make a thing attractive that's why learners want to see, want to understand, and want to think about it. A good feeling induced in them which make it easy and interesting. Smart phones are big example of scientific creativity and technical advancement. Working of these smart phones has become easy and all types of persons are using it happily. Attractive designs, advance features have made it useful for everyone.

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