CHAPTER I

PROLOGUE

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1.1 INTRODUCTION

It is today's students who must be prepared for a world in which their ability to function will not depend on their mastery of facts and principles now taught in school but rather on their ability to deal with new facts and principles that have not yet been imagined. Every child has valuable contribution, to be given out to the common goods of the society. Consistent with Guilford's suggestion of increasing a mental ability through exercises, one could think of creative thinking programme which has been widely used as a method to expand perspective knowledge of consciousness and unconsciousness in man, in the modern time.

Brain Storming Technique Programme is the one, which blended with wide range of specialities with physiology, psychology and sociology. Myers and Torrance attempt to recognise and strengthened a broad spectrum of simple and complex creative abilities. Robert M. Olton and Richard S.
Crutchfield said that the ability and readiness to use the cognitive capacities efficiently and effectively at any given stage of development can be benefitted substantially from direct training over almost inseparable odds.

It is axiomatic that to think intelligently, is to think creatively.

A society achieves with inventive power, on the whole could be the most powerful progressive society. Creativity, in education could compensate the loss suffered hitherto due to environmental influences which formerly forced us to develop imaginations. Thus it could help to build and preserve our integrated nation. Creative education, not only could help to compensate the loss suffered due to incompatible environmental influence, but help to develop our very destiny, of course, it may involve race or conflict between education and our ability to keep ahead creativity.

For this, there is a felt need to identify the creative students to help them and give them guideline properly in such a way that they may be-

1) able to know themselves, and
2) able to fulfil the demands of the country.

Looking on their felt need, the investigator has made an humble attempt to develop creativity of the secondary
school children. To ensure the continuity of the family of the man and to enrich culture of the same, one should not have understanding of creative thinking, which is itself a potential force. In spite of tremendous development of the concept of creative thinking, learning-teaching programmes have not been displaced from their outdated roles as they have to preserve and disseminate culture of human race to play their role in the years to come.

If, the creative urge in the learner can be diagnosed and channelized into learning experiences, such learning experiences can become a source of excellence in education, especially at the primary and secondary stage. When the child is developing his personality, urge for experiences in the learning situation help him in adding new dimensions to personality growth. It not only structure the mind, but make him a rational creative thinker. According to Gitica,

"Understanding of the creative process is particularly important because it can assist and control the learning process and being a process of change, evolution, development, and imagination of subjective life and sense of the inventive mind that are stifled in opposition and hindrances. If this neglect is left longer, a sickening poverty which was already come in world persist."

A dynamic and perspective society has to find ways
and means to resolve the issues which have been there, and are faced in any sphere of life.

To tackle the reality of knowledge expansion and information overload in an effective manner, methods of teaching will have to be developed on creative and critical thinking abilities of pupils. Therefore, there would be greater emphasis on knowing, rather than on the known, or how to know rather than what to know. Further it is bound to throw new challenges; therefore, it becomes imperative that education system should equip itself adequately to meet the challenges by effecting appropriate modifications in teaching-learning strategies. Tomorrow's problems cannot be solved by today's outdated tools. In order to function effectively, the future citizens will have to acquire new skills and develop new attitudes and ways of Creative Thinking.

There exists a pronounced gap between creative thinking potential and creative thinking performance. There are various techniques to close this gap and to achieve a level of highly skilled or creative teaching such as brainstorming technique, attribute listing, checklist, morphological synthesis, synetics and buzz session. These techniques for creative thinking development are conscious and deliberate procedures for producing new combinations of ideas.
The present study attempted to find the effect of Brain-storming Technique on creative thinking ability of School going children of class IX. It is basically experimented in design and has been undertaken to find out the effect of Brain-storming Technique Programme on Creative components. The study explains that BSTP must be a natural, spontaneous and enjoyable process, which is said to bring about natural changes in physiology and functions by releasing pent up energy and accommodate awareness to eradicate the creative thinking obstacles and strains. Expanding the consciousness to facilitate the mastery over the subjects. Creative imagination is itself a basic tool in the acquisition of knowledge, becomes more usable when imagination synthesized and dynamically extended.

According to Alex F. Osborn

"The harnessing of automatic energy was a spectacular triumph of human imagination."

It is also important to note that the scientists, industrialists, politicians, artists, writers and medical researchers of the future are currently students in our school. Present educational practices typically fail to foster creative growth. They perhaps even stifle the imagination of our learning aspects.

1.2 IMAGINATION: POWERFUL MEAN FOR CREATIVITY

Imagination is an ability to picture in the mind
situations, objects and individuals which are not present before the senses. It means that imagination is a tool or means for creativity. According to some theories, creativity is defined as the ability for divergent thinking or open-ended thought, while others equate creativity with high intelligence. Creativity may also be characterized by a distinctive personality type. The American writers Jackson and Messicle⁵ argue that creativity must include elementary novelty, appropriateness, transformation and condensation while in operational terms, the creative individual scores highly on open-ended tests.

Creative imagination is an important tool to develop creativity. Creative imagination is the power of reproductive images stored in the memory under the suggestion of associated images for reproductive imagination. Imagination, it is a psychologists' term, for perception recalled after the stimulus has ceased, for expanding 'seeing is the mind's eye'. Creative imagination may recombine former experiences in the creation of new images directed at a specific goal or aiding in the solution of problems for creative imagination.

"Imagination is the powerful catalyst which every child possesses and can have at his command", said Margaret S. Woods⁶, a master of lighting the flame of creativity and keeping adults from stifling the creative spirit of child".
Investigator kept in mind the point that is the students could be trained to use more productively the talent which they intimately possess. This training is subject to disciplines similar to those difference in order to time a rich and satisfying life. They should be able to tap their full measure of creativity and intelligence. Pupils of today must become self-sufficient finding lasting satisfaction within themselves rather than working to the right social roles for fulfilment. They would be able to develop their full capacity for harmoniously facilitate the unmanifest potentialities of an individual to manifest in the best form. It is also thought to help the student to his mental thinking process and environment. In creating a climate where creativity can flourish and where creative teaching is the hallmark of the teaching-learning experiences, the teacher must assume responsibility akin to the farmer where work begins only after the seed is sown. It remains for him to create the nurturing conditions which will stimulate the development of the potentialities of the seed. Both internal conditions viz. I.Q. mental creative abilities and external conditions like home environment, school climate, programmes, time duration for incubation, group discussion and so on influence the direction and extent of growth possible. The nurture of the child like the nurture of the seed depends upon the conditions for growth.
In view of the challenges of twenty first century, the students will have to learn how to think rather than what to think. The future will continue to witness knowledge expansion and challenges at a tremendous speed. It will be impossible to go stuffing each and every new development in the coming days as it will lead to the question of facing them.

Life on this planet is bound to undergo changes of unprecedented order in the coming days, which affects man's survival. During last two decades research projects have turned up evidences, that creativity can be taught and at the same time, have suggested responses from pupils.

There is an urgent need to make students aware of creativity and to educate them to think creatively.

Keeping the above facts in view, the investigator has decided to undertake this research study.

1.3 THE PROBLEM

"Development of Brain Storming Technique and to Study Its Effect on Creativity of Secondary School Children".
1.4 KEY WORDS: THEIR CLARIFICATION

It is essential to know and clarify first the meaning of certain terms known as key words in the problem to be undertaken. They are as below:

(a) Development

(i) The act or process of developing progress.

(ii) A developed state, form, or product.

In a comprehensive dictionary of psychological and psychoanalytical terms defined development as follow:

(i) A sequence of continuous change in a system extending over a considerable time; specifically such change, or related and enduring particular changes, as follow one another in an organism from its origin to maturity or to death.

(ii) Such sequence leading to irreversible change.

(iii) Such sequence leading to progressive change for a higher degree of differentiation and complexity in the system.

(iv) The outcome of change in any of the proceeding senses. The changes may be in structure, function or organization; they may be in size, differentiation, complexity, integration, or efficiency.

(b) Technique

According to Jess Stein, technique can be defined
as follows:

(i) The manner and ability with which artistic, writer, dancer, athlete, or the like, employs the technical skills of his particular art or field of endeavours.

(ii) The body of specialized procedures and methods used in any specific field, especially in an area applied science.

(iii) Methods of performance; way of accomplishing.

(iv) Technical skill; ability to apply procedures or methods so as to effect a desired result.

(v) Informal methods of projecting personal charm, appeal etc. He has the greatest technique.

(c) Brain Storming

Brain storming is the technique of thought process which will lead to new ideas and innovation.

Psychologists have tried to explain this word as below:

Dr. Alex. F. Osborn10 "The Father of Brain Storming" and a pioneer of creativity education defined "Brain Storming" means using the brain to storm a problem and he discussed the process into the following five phases:

(i) Orientation:
   Picking out the problem.

(ii) Preparation:
gathering relevant material in the organizational effort.

(iii) Analysis and Ideation:
Assessing ideational solutions.

(iv) Incubation:
A ming lag to synthesize problems and solutions.

(iv) Evaluation:
Putting to pieces together and verifying the solutions through further testing of evaluation.

In fact, the creation of new ideas will require tremendous mental effort, that is why it is often said that creativity is "Painful".

Thomas A. Edition\(^{11}\) once said that no one researcher should be deceived by the seeming simplicity of this procedure, it is simple enough to be effective, but it certainly is not automatic.

According to Liogon\(^{12}\) originated brain storming involves rapid-fire, spontaneous suggestions from a group participating in producing freely a large number of ideas which are wild or sensible. Out of the numerous ideas that result, there is a maximum of assurance that many good ideas will be generated.

Eton B. McNeil and others\(^{13}\), "It is an approach to group problem solving in which it is assumed that the more ideas put forward, the better the chance of reaching the best possible solutions."
It can be said the terms of originality as contrasted to conformity, as process, are related to mental abilities and as product.

Jess Stein defined creativity as, the state or quality of being creative; creative ability or process; creativity in the performing arts, the great need for creative in modern industry.

Creativity is a process through which the individual learns something new, motivated by his own desire to discover and seize upon a new ideal or a new experience, and to explore this newness until he is satisfied that he knows about it.

1.5 OBJECTIVES OF THE STUDY:

The objectives of the present investigation are as under:

1) To establish the procedure of Brain Storming Technique for the secondary school children in Indian environment.

2) To provide the BSTP for the Secondary school children.

3) To study the impact of BSTP on creativity levels
4) To investigate the impact of BSTP in relation to the intelligence levels of the secondary school children.

5) To suggest recommendations based upon the findings of the study.

1.6 LIMITATIONS OF THE STUDY

Even with specific objectives of the study, there are some limitations too in every research study. This study has also the limitations— which are restricted in a particular way. They are mentioned below:

1) This study is limited to the class IX of the Secondary school.

2) This study is confined to Gujarati speaking school children.

3) The content area is restricted to the social sciences and general interest of secondary school children.

4) One school of the Sabarkantha District is selected.

5) Further the study is confined to Gujarati medium rural secondary school.
1.7  **SCOPE OF THE STUDY**

This study would be an eye-opener to those who deal with such creative children in teaching-learning strategy in school and every walk of life.

The present study would be of great significance to the teacher-educators in guiding the students to develop creative potentialities.

Creativity begins in the mind is urged by an irresistible force demanding expression. The child does not create in a vacuum. He must have experiences out of which to get the "stuff" for creating. Investigator developed Brain Storming Technique Programme, because it is the responsibility of the adult to develop the understandings, techniques, and abilities necessary to guide school children in their track toward self-realization through creative learning and expression. It seems to be significant for suggesting the guidance for development of creative abilities in children.

It is again very important for the educational planners and universities to guide to introduce creative thinking programmes at the university level to judge highest reward of man power.

This study will help the students because the person trained in the creative process has a greater chance
of developing worthwhile innovative than the person without such specialized training.

1.8 PLAN OF THE STUDY

The report of the present study has been presented in seven chapters. The scheme of chapterization is as follows:

The First chapter gives the introductory details pertaining to the study.

The second chapter deals with some theoretical aspects concerning the concept of creative thinking.

The third chapter describes the researches done in this area, that enables the investigator to decide the size of the sample, procedures to conduct the BSTP and carry out its usability.

The fourth chapter explains in detail the development of BST programmes. It describes the procedure followed for the establishment of BS Technique and development of BST Programme. The BST developed by Osborn in the Western countries has been tried out with the modifications whenever the necessary changes are required.

The fifth chapter deals with the experimental
design. It also deals with description of tools, selection of samples, and hypotheses.

The sixth chapter deals with the data and interpretation.

The seventh chapter is concerned with conclusions and suggestions drawn on the light of the interpretation given in the previous chapter. Necessary comments regarding further research to be taken by more ambitious workers have been summed up in this chapter.

The body of the report also embodies a bibliography, BSTP and a list of appendices.
REFERENCES


10. See also, Davis and Scott, Training Creative Thinking, 1971.