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**DEVELOPMENT OF AN INSTRUCTIONAL STRATEGY  
FOR PRIMARY SCHOOL TEACHERS TO TEACH  
CREATIVE AND CRITICAL THINKING SKILLS**

**A Summary of the Thesis Submitted to  
The Maharaja Sayajirao University of Baroda  
for the Degree of  
Doctor of Philosophy in Education**

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## **1. Introduction**

Thinking is the ultimate human resource. The quality of our future will depend entirely on the quality of our thinking. This applies on a personal to a professional level, as well as on community level to the global level. In a rapidly changing world very often we find that our thinking is inadequate to meet the demands and challenges put upon it. With the advancement of Science and Technology, the world we live in becomes very narrow. Uses of internet and communication devices have broken all the boundaries and geographical limitations. With the rapid development of multimedia, access to information and communication has become very easy. All these and many more contributions by human beings make us feel proud of being human on this universe.

It is observed that our schools have different educational and developmental objectives distributed in various branches subjects in curricula. Various curricular, co curricular and extra curricular activities are carried out in order to meet these objectives. The central organizing force to all these activities is to nurture the creative and critical thinking in the minds of the students so that they become productive and responsible citizen of the future. In the days of technology it should be realized that teaching is not merely imparting the content rather how to think with the content should be the focus of any school activity. Our system of education is been criticized because of undue emphasis on the teaching of content and overemphasis on the rote memory. There is a need shift our practices of teaching and evaluation from memorization of content and recall in examination hours to development of foundation skills of learning and independent thinking.

## 2. Statement of the study

### *Development of an instructional strategy for primary school teachers to teach creative and critical thinking skills*

## 3. Objectives of the study

1. To select appropriate thinking tools for enhancing creative and critical thinking skills.
2. To develop an instructional strategy using selected combination of thinking tools using appropriate content to enhance creative and critical thinking skills.
3. To enable teachers to incorporate the creative and critical thinking skills into lesson plans.
4. To study the impact of the instructional strategy in enhancing creative and critical thinking skills in teachers.

## 4. Explanation of the terms

Instructional strategy in this study refers to the lesson plans incorporating thinking tools and thinking strategies using appropriate content which is to be practised for developing creative and critical thinking in sampled group of teachers. It consisted of thinking tools, thinking strategies and lesson plans incorporating these thinking skills and strategies.

**Creative thinking:** the thinking ability to come up with new ideas, to solve problems in original ways, one's imagination, creative behavior in productivity. Some of the dimensions of creativity which the investigator had included in this study are:

1. Fluency- the speed and ease with which one comes up with new idea/s
2. Flexibility- ones' ability to see things from different angles, including ability to see all senses in the creation of new idea
3. Originality: an ability to produce ideas that are unique and unusual

**Critical thinking:** the thinking that determines the authenticity, accuracy and worth of information or knowledge claims. A few dimensions of critical thinking that would be considered for the study are comparing analogous situations; evaluating or examining actions; abilities of reasoning or decision making and ability to solve complex problems.

#### **Effectiveness**

Effectiveness will be measured on the scores obtained by sampled teachers on test constructed by the investigator. This test consisted of items based problem solving and brainstorming.

### **5. Delimitation of the study**

Study was delimited to the content of standard I to VII appropriate to selected tools during the instructional process.

Study was delimited to the Gujarati medium primary school teachers following syllabus of Gujarat State Board of School Textbooks.

Instructional material and test measuring creative and critical thinking is in Gujarati language because the selected sample for the study was from Gujarati medium only.

Test to measure creative and critical thinking into the teachers is validated through the comments of experts and not the standardized one.

## **6. Methodology of the study**

**6.1 Design of the study:** The research design selected for the present investigation was **one-group pretest posttest design**.

### **6.2 Population and Sample**

#### **Population**

All primary teachers of Visnagar taluka of Mehasana district following text books of Gujarat State Board of School Textbooks, Gandhinagar constituted the population for the present study.

#### **Sample**

All teachers of Visnagar taluka were selected on the basis of their willingness to participate throughout the study. In all 153 teachers have shown their interest and school authorities have permitted them. 153 seemed to be a large number for conducting the present study so finally twenty five teachers were randomly selected for present study.

### **6.3 The tools for the present study**

The researcher had reviewed the available tools developed by other researches in order to study creative and critical thinking for their respective study and developed two tools:

(1) Creative and critical thinking tool: in order to study the impact of intervention on sampled teachers.

(2) Reaction scale: In order to examine the views of the teachers regarding the instructional strategy reaction scale was developed by the investigator. This scale is consisted of twelve items.

#### **6.4 Data collection and Data analysis**

The major objective of the present study is to develop instructional strategy for primary school teachers to teach creative and critical thinking skills using content. In order to study the effectiveness of the developed strategy for enhancing creative and critical thinking quantitative data were collected which were analyzed using correlated t test. Besides this investigator developed reaction scale in order to estimate effectiveness of the intervention. Reactions of the sampled teachers were analyzed using percentage.

#### **7. Major findings of the study**

The developed instructional strategy incorporating thinking tools and thinking strategies was effective in enhancing creative and critical thinking.

Sampled teachers improved their fluency, flexibility and originality dimensions of creativity thorough the instructional strategy.

Sampled teachers improved their ability to think critically thorough the instructional strategy.