CHAPTER I

INTRODUCTION

AND

SIGNIFICANCE OF THE STUDY
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INTRODUCTION, SIGNIFICANCE AND OBJECTIVES OF THE STUDY

1. INTRODUCTION:

The concept of creativity and the question of its fostering has pivoted the attention of researches in education and psychology all over the world. Psychologists have been evincing greater interest in the functioning of the mind and the nature of human genius for centuries. After the work of Guilford and Torrance more attention is bestowed on research on creativity. The present thesis is related to the study of creativity and other variables such as Classroom Climate, Achievement Motivation and Intelligence.

1.1 SIGNIFICATION OF THE STUDY:

Research on classroom teaching and its associate variables are gaining importance now. It is said and believed that the destiny of our country is decided in the classrooms. Hence, it needs no further explanation why this area of research is considered vital. Secondly, the situations in classroom present a challenge to the research. Many variables interest and influence classroom teaching and so no amount of research could ever be considered adequate. Classroom is a place where a group of learners attempt to learn some knowledge
or skill under the guidance of a teacher. Research throws light on the issue of teaching for creativity.

If creativity is conceived as one of the variables associated with the factors such as concept formation, critical thinking, problem solving skill, intelligence, i.e., cognitive style of thinking classroom climate does play an important role in fostering creativity. The above discussions indicate the significance and need for research on creativity and classroom climates.

Classroom communication happens to be a felt need. That classroom is the focus of all educational activity needs no elaboration. The communication and interaction in a classroom between teacher and pupils and among pupils play an important role in determining the achievement of pupils. Recent researches have focussed attention on what transpires in the classroom by way of interaction between teacher and pupil and also among pupils. Effective teaching is said to occur when the teacher and the taught interact among themselves. Hence, there is a need for the study to measure the level of interaction that takes place in classroom.

There is a crying need for nurturing creativity in every classroom. Wherever it dare, it is by chance and accident rather than by design and understanding.
The need of changed altitude towards instructional objectives and teaching practices has long been felt by educationist in India. The Secondary Education Commission (1952) lays stress on the need of dynamic teaching techniques. The same view has been endorsed by Education Commission (1966).

The National Council of Educational Research and Training has framed a curriculum for the ten-year school. It points out that the child's spontaneity, curiosity, creativity and activity in general should not be restricted by rigid and unattractive methods of teaching and environment for learning. (N C E R T, 1975) One of the objectives of the primary education is that the child should be able to express itself freely in creative activities and should acquire habits of self-learning.

A Review Committee appointed by the Government of India, in 1977 has given its suggestion to review the present scheme of studies and the time allocation for various subjects with a view to ensuring that the institution has adequate time for experimentation, creative work, remedial instruction, etc.,

The committee offered an individual based objective. It aims at enabling an individual to acquire knowledge, skills, habits, attitudes and values necessary for

(1) a successful performance of his responsibilities
as a citizen, and

(2) a rewarding personal life for development of (i) innate talents (ii) powers of creative enterprise, and (iii) the capacity to approach the splendour of life revealed from communion with nature and man with man.

The Review Committee observed that the general conditions prevailing in the majority of existing schools progressively reduce the urge to experiment and to undertake creative work. The committee has emphasised the need of creative education.

It maintains -

If the purpose of education is to nurture the child's capacities to the full and to give the people not only a useful occupation but a full and abundant life, then the creative urge in the children must in every possible way be actively stimulated and cultivated in as many directions as possible.

In view of the conflicting research findings which need further probing of the problem of creativity the investigator has taken up this research.

As no research work has been carried out incorporating classroom climate, intelligence and achievement motivation the
investigator desires to study creativity in relation to the variables mentioned above.

1.2 STATEMENT OF THE PROBLEM:

The problem under study is:

"A Study of creativity of secondary school students in relation to classroom climate, achievement motivation and mental ability".

1.3. DEFINITION OF THE TERM:

1. A STUDY: The word study denotes acquiring the knowledge about creativity of secondary school students in relation to classroom climate, achievement motivation, and mental ability.

2. CREATIVITY: Torrance defines creativity as a mental process of seeing or creating most unforeseen and novel relationship between two or more things or ideas.

3. CLASSROOM CLIMATE: Classroom climate is a combined resultant effect of all the events that take place as a result of interactions between teachers and taughts.

Operationally defined classroom climate means the scores obtained on a scale to measure classroom climate.

The components of the classroom climate are
1) Authenticity
2) Legitimacy
3) Productivity.

4. ACHIEVEMENT MOTIVATION: McClelland and Atkinson (1964) have defined the term "achievement motivation" as; a cluster of thoughts associated with striving for some kind of excellence. It is also suggested that a concern for excellence in performance if analysed further, would reflect the following three basic characteristics.

- Competition with the standards set by other or oneself.
- Unique accomplishment, and
- Long term involvement.

5. MENTAL ABILITY: Mental ability means general mental ability. It is synonym for intelligence.

Stoddard postulated that intelligence is the ability to understand problems that are characterized by (1) difficulty (2) complexity (3) abstractness (4) economy (5) adaptiveness to a goal (6) Social value and (7) encouragement of originality.

The British psychologists define it as an 'ability to see relevant relationships between objects or ideas and (2) Ability to apply these relationship to novel situations.
Knowledge of creativity is paradoxical and complex and the most steadfast investigation is constantly beset with feelings of awe and a sense of mystery as one pursues his inquiry. Investigation into creativity is fraught with a host of concrete and theoretical problems. Creativity has direct pertinence to diverse types of disciplines and to the enhancement of humanistic goals in technological and atomic age. In psychiatry and psychology an understanding of creativity is of utmost and immediate importance. Pertaining quite directly to the basic concepts of health and disease, insights into creativity would contribute significantly to the medical practice of psychiatry. Since creativity is in the most definite sense a capacity of those specially talented human beings who contribute significantly to society and to life it is an ideal form of behaviour. Consequently it behooves us to try to understand creativity as specifically as possible in order to develop a clear ideal notice.

For psychology the problem of creativity pertains to Questions about normal functioning, and it relates as well to current central concern with motivation, cognitive functioning and personality theory. Creativity involves unusual, seemingly deviant psychological process that lead to highly positive
outcomes. Creative thinking is a form of cognition with special relationships to learning, concept formation, and problem solving. Many other types of professionals, including educators, educational psychologists, business executives and government personnel concerned with man power, are interested in creativity in an immediate and pressing way, primarily in order to identify and nurture creative talent. Clearly it is a laudable aim. Nurturing creativity could contribute greatly to the benefit of all mankind. How such a purpose could be advanced or whether it is in fact feasible to consider nurturance of creativity a realistic possibility depends entirely on an understanding of the phenomenon.

Guilford's work and influence is usually considered to have been a key stimulus for recent interest in creativity among psychologists. He is concerned with the structure of the intellect. Seeking for underlying factors in the ability to answer test questions with alternate solutions. Guilford has defined and described the overall factor of "divergent production" as a creative operation. He emphasizes fluency, flexibility, originality and elaboration in creative thinking. Investigators are benefited greatly by his research findings, factor analytic approach and concept of the structure of intellect. The spring of creativity exists in all children, but in most the flow has been blocked.
A spring of fresh water is nuisance when it first issues from the ground, producing only mud. But, when the spring is given a protective and delimiting margin it becomes a source of joy. The same is true of creativity.

What kinds of teachers and counselors are best able to help children restore the creative potential? This large question assumes that there is some kind of relationship between teacher personality, teacher's classroom behaviour, and pupil's gain in creativity. As research has indicated, this relationship if it exists, is far more complex than simple cause and effect. It also involves more than just knowledge about curriculum, that Children need supportive guidance for creative performance. This has been established by research. Recent research also hints that effective teaching behaviour fostering creativity include energy, courage wisdom, patience, and originality.

Whitman (1961) says: We are all great poets but only the greatest poets know it. We are all potentially creative, but only those who have become creative realize it. One of the best ways to cultivate our own creativity is to help children cultivate theirs.

Parnes (1959) observes that of all the powers of man, creativity seems most unique. The generally accepted custom among the ancients was to ascribe divine origin, inspiration
or direction to any great creative work. Even the aspects of initiation and selection which are universally found in creative function appear somewhat mysterious. Creative withdrawal and return, as Toynbee (1956) has pointed out, is a characteristic of creative acts of groups as well as of individuals.

Creativity is a new concept, recently attributed to the personality of man, and it is still fraught with the same mystical connotations. For this reason, it is necessary to be careful in attempting to define it and to distinguish between creativity and other similar intellectual functions. It is also imperative to note possible different variables of creativity.

1.4.2 THE MOTIVATION FOR CREATIVITY:

C.R. Rogers (1959) remarks: "The mainspring of creativity appears to be the same tendency which we discover so deeply, as the curative force in psychotherapy - man's tendency to actualize himself, to become his potentialities.

C.R. Rogers (1959) refers to the directional trend which is evident in all organic and human life - the urge to expand, extend, develop, mature, the tendency to express and activate all the capacities of the organism, to the extent that such activation enhances the organism or the self. This tendency may become deeply buried under layers after layer of encrusted
psychological defenses; it may be hidden behind elaborate facades which deny its existence. Rogers (1959) believes that it exists in every individual and awaits only the proper conditions to be released and expressed. It is this tendency which is the primary motivation for creativity as the organism forms new relationships to the environment in its endeavour mostfully to be itself. Concept of achievement motivation or re-achievement or achievement was put forth by Murray in 1938. It assumes practical importance in education and other fields after the hard labour of McClelland and his co-workers.

This need is related to an individual's striving for success and better results in various walks of life. The sense of achievement gives a further impetus to work and endurance. This is one need which the teacher can use in order to direct a pupil's behaviour in intellectual learning and personality development. An individual whose achievement needs are not satisfied, usually withdraws from real life situations' or tries by maladjusted behaviour to put up a pretence of achievement. A child whose school work gives him a feeling of satisfaction and a sense of achievement is better adjusted than a child who only meets with failure.

McClelland and number of his associates investigated primary human motive through the intensive study of a single motive which he called achievement motive. The dis-satisfaction
of McClelland and his associates with the current motivational theory led them to elaborate their own systematic view in the form of a model which McClelland calls the effective arousal model of motivation. McClelland offered his view that motivation is always accompanied by arousal or effective arousal.

According to him a motive is red-integration by a cue of a change in the effective environment. Red-integration means reinstatement of a psychological process. Motives arise or appear when learnt cues reinstate emotional states or feelings. He makes emotional arousal contingent or dependent on a cue. All moves are learnt whether they are primary, physiological drive or the social motive.

The achievement motive develops out of the expectations based on various experiences the individual has had with the common problems of life, from learning to walk to learning to eke out one's livelihood. The achievement motive, can be identified on the basis of individual's expectation of success provided he is personally involved. A mere intellectual attitude of achievement does not necessarily indicate an operation of a true motive.

The research of McClelland and others have shown that the mother's standard of training in independence and mastery have an impact on motivation. Experiences early in life are
the deciding factors. Restrictions to independence and mastery that a mother may impose may affect the motivation adversely. The same things can be translated for the teacher as is said of the mother's influence on children. Extreme punishment for failure may lead to giving up the effort but moderate punishment may serve as a goal to harden striving.

1.4.3 CREATIVITY AND INTELLIGENCE:

Psychologists have defined intelligence in a number of ways. Dictionary definitions of intelligence centre around understanding or reasoning, taking effective action in new situations and acquiring and utilising appropriate information.

Thorndike (1963) defines it as the power of good responses from the point of view of truth or fact. He recognised that intelligence is given meaning only by its observable consequences. According to Herrman (1955) intelligence involves two factors, the capacity of knowledge and knowledge possessed.

Copvin (1957) says that an individual possesses intelligence in so far as he has learned or can learn to adjust himself to his environment.

Woodrow (1956) defines it as an acquiring capacity.
It is an ability to learn new experience. Another more comprehensive and perhaps appropriate description given by Garret is that intelligence includes at least the abilities demanded in the solution of problem which requires the comprehension and use of symbols.

Burt (1962) defined it as innate, general cognitive efficiency.

It is seen from the above definitions that intelligence is not a simple entity but a complex function and depends upon the resultant effect of the interaction of a number of factors. "While there has been a great deal of discussion in recent years concerning the importance of fostering "Creativity" in children, there is little solid evidence to support the claim that creativity can be distinguished from the more familiar concept of intelligence. Time and time again, however the proof offered to support the existence of a type of cognitive excellence different from general intelligence has proven to be a will-O-the wisp.

The logical requirement for such a proof can be put as follows: The psychological concept of intelligence defines a network of strongly related abilities concerning the retention, transformation and utilization of verbal and numerical symbols; at issue are a person's memory storage capacities, his skill in
solving problems, his dexterity in manipulating and dealing with concepts. The person high in one of these skills will tend to be high in all; the individual who is low in one will tend to be low in all. But what of the psychological concept of creativity? If the behaviour judged to be indicative of creativity turns up in the same persons who behave in the ways we call "intelligent", then there is no justification for claiming the existence of any kind of cognitive capacity apart from general intelligence. It can be asserted that the notion of greater or lesser degrees of creativity in people simply boils down, upon empirical inspection, to the notion of greater or lesser degrees of general intelligence.

The relationship between creativity and intelligence has been a point of controversy for a long time. The controversy hovers around two stand points:

(1) Creativity is a distinct aspect of intellectual functioning, which is for all practical purposes independent of conventional intelligence.

(2) Creativity depends upon unique cognitive factors which function within the hierarchical structure of intelligence proposed by Vernon (1950), Foster (1971)

The first standpoint is subscribed by Guilford (1950)
Wilson et al. (1954), Getzels and Jackson (1962), Torrance (1962),
They have claimed that creativity and intelligence are two distinct mental abilities each involving a special cluster of skills. This viewpoint derives support from the empirical evidence obtained in the correlational studies, inland and over seas, where low relationship between creativity and intelligence was found. (Torrance, 1962, Richardset al 1964, Guilford and Hoepfner 1966, Passi 1972, Mehadi 1973, Patel and Joshi, 1976); and through the factor analytical studies indicating separate factors of the two (Wallach and Kogan 1965; Cropley, 1966; Guilford 1956; Kogan 1971; Gakhan and Kaura 1977).

The second viewpoint is supported by Burt (1962) (1964) McNemar (1964), Wodtke (1964), Marsh (1964) and others. They attribute creative production mainly to the operation of general ability rather than a distinct skill labelled as creativity and suggest that conventional intelligence tests can be used effectively for measuring creativity by adding some divergent thinking sub-tests to them.

1.4.4 CLASSROOM CLIMATE:

The demand for developing creative people has resulted in new pressures upon the schools to incorporate creativity as an aim of education. Research findings have revealed that
creativity can be fostered in classroom through training programmes.

W. Waller (1967) describes teaching skill as the ability of the teacher to perceive the personality of the classroom and then draw on its strength to organize students for learning tasks.

What children learn in classroom depends as much on the structure of the social environment as on the cognitive skills that are taught.

Coles, Brembeck, have pointed out that "The good teacher understands that students are culturally predisposed to behave as they do in classroom groups; The effective teacher works to use these behaviour patterns for lecturing purposes".

In order to channel classroom behaviour into constructive learning, the good teacher creates a wholesome circular response, provides for individual differences, enhance's the students self concept, and recognises the classroom group dynamics by utilising group methods of instruction. He develops within the group wholesome relationships which serve to control behaviour.

The climate of the classroom can be pictured as a
personality sketch of an institutions. As personality describes an individual, climate defines the essence of an institution. Climate also refers to the environment. Environment is the spring of the organisation. The culture, otherwise known as climate, influences the organisation. Climate plays an important role in any formal organization.

1.5 OBJECTIVES OF THE STUDY:

The present study was conducted in view of the following objectives:

1) To find out the level of creativity of secondary school students of Std. VIII and Std. IX.
2) To find out the level of n.Ach. of students.
3) To find out the level of General mental ability of students.
4) To study the effect of n.Ach. on creativity.
5) To study the effect of classroom climate on creativity.
6) To study the effect of mental ability on creativity.
7) To study the effect of different interactions between n.Ach. mental ability and classroom climate.
1.6 **HYPOTHESES:** (For Std. VIII)

The following hypotheses were formulated for this study:

1) There will be no significant effect of classroom climate on the scores for creativity.

2) There will be no significant effect of n.Ach. on the scores for creativity.

3) There will be no significant effect of mental ability on the scores for creativity.

4) There will be no significant effect of n.Ach. and classroom climate on the scores for creativity.

5) There will be no significant effect of mental ability and classroom climate on the scores for creativity.

6) There will be no significant effect of n.Ach. and mental ability on the scores for creativity.

7) There will be no significant effect of n.Ach. mental ability and classroom climate on the scores for creativity.

8) There will be no significant difference between the mean scores for creativity of students belonging to various climate groups.

9) There will be no significant difference between the mean scores for creativity of students having high n.Ach. and low n.Ach.
10) There will be no significant difference between the mean scores for creativity of students having high mental ability and low mental ability.

11) There will be no significant difference between the mean scores for creativity of students having high n.Ach and high mental ability and students having high n.Ach and low mental ability.

12) There will be no significant difference between the mean scores for creativity of students having high n.Ach and high mental ability and students having low n.Ach and low mental ability.

13) There will be no significant difference between the mean scores for creativity of students having High N.Ach and high mental ability and students having low n.Ach and high mental ability.

14) There is a positive correlation between classroom climate and creativity.

15) There is a positive correlation between n.Ach and creativity.

16) There is a positive correlation between mental ability and creativity.
**Hypotheses:** (For Std. IX)

17) There will be no significant effect of classroom climate on the scores for creativity.

18) There will be no significant effect of n.Ach on the scores for creativity.

19) There will be no significant effect of mental ability on the scores for creativity.

20) There will be no significant effect of n.Ach and classroom climate on the scores for creativity.

21) There will be no significant effect of mental ability and classroom climate on the scores for creativity.

22) There will be no significant effect of n.Ach and mental ability on the scores for creativity.

23) There will be no significant effect of n.Ach, mental ability and classroom climate on the scores for creativity.

24) There will be no significant difference between the mean scores for creativity of students belonging to various climate groups.

25) There will be no significant difference between the mean scores for creativity of students having high n.Ach and low n.Ach.

26) There will be no significant difference between the mean
scores for creativity of students having high mental and low mental ability.

27) There will be no significant difference between the mean scores for creativity of students having high n.Ach and high mental ability and students having high n.Ach and low mental ability.

28) There will be no significant difference between the mean scores for creativity of students having high n.Ach and high mental ability and students having low n.Ach and low mental ability.

29) There will be no significant difference between the mean scores for creativity of students having high n.Ach and high mental ability and students having low n.Ach and high mental ability.

30) There is a positive correlation between classroom climate and creativity.

31) There is a positive correlation between n.Ach and creativity.

32) There is a positive correlation between mental ability and creativity.

1.7 DELIMITATIONS OF THE STUDY:

The present study was confined to only one district namely Madurai District, Tamil Nadu.
The study was further delimited to a sample of 1200 students studying in Std. VIII and Std. IX in Secondary Schools situated in Madurai City.

The study was further restricted to only ten secondary schools of Madurai city only.

1.8 SAMPLE:

The sample of the study consists of randomly selected 1200 students studying in VIII Standard and IX Standard of English Medium Secondary Schools of the Madurai City.

1.9 PROCEDURE:

1.9.1 TOOLS:

1. Classroom Climate Scale - CCS developed and standardised by Case, Baroda.

2. Achievement Motivation Inventory by Dr. Prayag Mehta.

3. Mixed Group Tests of Intelligence by Dr. P.N. Mehrotra

4. The verbal tests of creative thinking by Dr. Baquer Mehdi.

1.9.2 DATA COLLECTION:

The investigator administered the Tests on creative thinking and mixed group test of Intelligence to students by distributing the test materials in person. As these two tests
were time tests control of time was done with the help of a stopwatch. Classroom climate scale questionnaire and achievement Motivation Inventory were answered by students in a threat free atmosphere. No time limit was set to answer the AMI and CCS.

1.9.3 STATISTICAL TECHNIQUES:

The descriptive as well as inferential statistical techniques have been used for the study; mainly, the following techniques were used.

1. Mean, S.D. and Median.
2. Correlations.
3. Analysis of Variance.
4. "t" technique.
5. The study followed 2 x 2 x 2 factorial design.

After employing the tools and administering the test the sample for the study concerned was divided on the basis of their mental ability at two levels (High and Low) Achievement Motivation at two levels (High and Low) and classroom climate two levels (High ALP climate and Low ALP climate). For each standard namely VIII and IX, Eight cells were framed taking 20 students in each cell with different n.Ach. Mental ability and classroom climate.

The total cells amounted to sixteen i.e., 8 cells for
at two levels (High ALP climate and Low ALP climate). For each standard namely VIII and IX eight cells were framed taking 20 students in each cell with different n ach, Mental ability and classroom climate.

The total cells amounted to sixteen i.e., 8 cells for standard VIII and 8 cells for Std.IX.

The data was subjected to statistical manipulation to find out the effect of climate, mental ability and achievement motivation upon creativity.

The technique of Analysis of variance was used to test the significance of the effect of N ach, and mental ability on the scores of creativity of students belonging to different classroom climate.

* t * tests were used to test the significance of the differences between mean scores for which the variance ratios (F-ratios) were found significant.

1.15.0. SCHEME OF CHAPTERIZATION:

The detailed report of the present study consists of five chapters:

The first chapter contains the introductory part. It deals with the introduction significance of the study, objectives of the study, definition of terms and hypotheses and delimitations of the study.
The second chapter is concerned with the review of related literature. The studies in the area of Achievement motivation, mental ability, classroom climate and creativity have been reviewed.

The third chapter deals with the planning and procedure of the study. This chapter describes in detail the procedures adopted for the study. It describes the tools and their characteristics, selection of sample, data collection, technique of analysis of data and the statistics used.

The fourth chapter deals with the details of analysis and interpretations of the data.

The fifth chapter deals with observations, conclusions and suggestions arrived at.

The Chapter deals with the observations made on the basis of the present investigations' personal experiences and conclusions drawn on the basis of the analysis of each aspect of data. An attempt has been made also to offer suggestions to the teachers in general as how to foster creative thinking among students in the classroom.

Besides this the body of the report consists of a large number of tables and graphs, wherever necessary. A list of bibliography is given at the end and the appendices are also appended.

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