In a day, when you don't come across any problems – you can be sure that you are travelling in a wrong path

— Swami Vivekananda
CHAPTER – I
CONCEPTUAL BACKGROUND

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1.1 Introduction

Mental abilities are distributed normally according to the law of Nature. Hence, a portion of the total population should be of superior quality and naturally some are backward in mental abilities. These backward people like mentally retarded, physically handicapped, emotionally disturbed, are easily seen in the society. But the people of superior quality, that is, talented and creative persons are almost invisible in the society of developing countries like India. Because, disability expresses itself but talent and creativity need something special for expressing themselves. Without that condition, stimulating environment, the talented and creative persons can not unfold their abilities and as a result they become common people of the society. This is a great loss to any nation.

In order to develop a society as well as a country, the importance of knowledge and skills can not be denied, but knowledge alone is not enough in this fast changing world. Creativity takes important roles in this case. Creativity provides the fundamental intellectual materials – ideas, concepts, insights and discovery that in course of time results in development of new theories, approaches, tools, products and a kind of mutual sharing that underline innovation. Innovation is the adoption and social transmission of creative discovery. The highly creative persons may bring about revolutionary change in the society in the dimension of advancement. Now the question is that, who are creative? Many research findings have established the truth that every child has creative potential more or less (Murphy, 1947; Fliegler, 1961). But the levels of creativity and the styles of creativity are different in different children.

A stimulating environment or situation that is open, democratic and free may contribute positively to release and develop creative potential. Torrance (1970) and Arieti (1976) emphasized the influence of culture and environment on the development of creativity. Society have been cruel in developing creative thinking in children. Our society is so orthodox that we are not ready for any change. Any new
thinking is curbed before it is expressed. Many people strongly believe that whatever exists today, is final and unchangeable. The vested interests in the society always oppose any type of contemplated change. We have always been making fun of those people who are different from ordinary people.

One of the most justifiable charge that can be labelled against our educational system is that it has neglected and all too often suppressed, the natural creativity of the young (Kneller, 1965). Education in our society is almost systematized and routinized at all levels from primary to the university. It has encouraged and has been encouraging listless passivity and rote memory. It is generally seen that our school programmes are not giving due place to the educational experience and proper environment which are conducive to the development of creative potential.

Ebel (1969) quotes Bloom and maintains that: “There is reason to believe that educational system can reduce originality and creativity. This negative effect on creativity is most marked when examinations, instructional materials and processes, all emphasize learning by rote and the goal is centred on getting through examination” [Gupta, 2006].

Among three different types of environment, namely; family, social and school environment, the family environment has important roles in nurturing and fostering creativity of the children. But some parents, while wishing to foster creativity, go about it, the wrong way. They are more concerned with external success and popularity instead of with inner growth and creative potential of their children.

The family environment directly or indirectly is controlled by its components like family structure, socio-economic status, family tension, life style of the family members, professions of the members, interpersonal relationship among the members, anxiety of the family members etc. Depending upon these components a variety of environments exist in different families of the society. As an active member of the family, the child must be affected by the family environment. But the degree of influences of all components is not same on creativity in the children.
1.2 **Concept of Creativity**

Creativity is considered as the ability to bring something new into existence. Again, creativity is considered only as the psychological process or processes by which novel or variable new products are created. Barron (1969) indicates that the role of creativity in the whole process of socialization is critical. A creative person can bring a revolutionary change in this world if he gets the proper environment or supporting elements to do so. Creativity has been known as a precious source of emergence, development and survival of human’s culture through ages.

Creativity is recognized as a multivariate phenomenon. The different perspectives that have been adopted to study creativity and different relationships exist among them. There are indefinite numbers of ways to be creative. Therefore, the investigator who attempts to conduct research in this Masonic field faces difficulty in defining creativity.

According to Drevdahl (1956), “Creativity is the capacity of a person to produce compositions, products or ideas which are essentially new or novel and previously unknown to the producer”. Here, the concept of creativity indicates the human’s ability to produce new one which is original. In the same way De Bono (1993) defines as “Being creative means to bring into being something that was not there before”. Spearman (1931) defines creativity as the power of the human mind to create new contents by transforming relations and thereby generating new correlates.

Guilford (1959) defines the creativity as the trait of human beings. He describes, “Creative children have a more general trait that includes not only originality, but flexibility, fluency and motivational and temperamental traits as well”. Again, Wilson, Guilford and Christensen (1974) mention, “The creative process is any process by which something new is produced – an idea or an object including a new form or arrangement of old elements. The new creation must contribute to the solution of some problems”. Torrance (1977) defines creativity, “as a process of becoming sensitive to problems, deficiencies, gaps of knowledge, missing elements, disharmonies and so on, identifying the difficulties, searching for solutions, making guesses or formulating hypotheses about the deficiencies, testing and retesting hypotheses and possibly modifying and retesting them and finally communicating
According to Berk(2002), “Creativity is the ability to produce work that is original, but still appropriate and useful”. Berk emphasizes rightly on the usefulness of new creation on the social context.

Guilford (1956) demonstrates “divergent thinking” as one of the most important intellectual operations by which the product or end result in the thinking process is reached. Guilford defines “divergent thinking” as a kind of mental operation in which we think in different directions, sometimes searching, sometimes seeking variety. The unique feature of divergent production is that a variety of responses is produced. He relates divergent thinking to certain well known output. These three factors are fluency, flexibility and originality, each of which shows itself in particular forms according to the contents and products with which it is concerned.

In general, four approaches (4Ps) are used to understand the concept of creativity, namely; Product, Process, Person and the Press (the environment in which the creation comes about).

All these definitions of creativity point out that creativity as the capacity or ability of an individual to create, discover or produce a new or novel idea or object, new solutions of the problems by rearranging or reshaping the environments. A creative person is very much aware of the environment and much sensitive to the problems. His thinking is fluent, dynamic, flexible, original and novel.

1.3 Nature of Creativity

Creativity is universal quality and is not bound by the barriers of age, caste, location or culture. Everyone of us possesses and is capable of demonstrating creativity to some degree in any particular field of activity. Creativity is innate as well as acquired ability of human beings. Although many research findings describe that creativity is natural endowment, but the influence of cultural background, experiences, education, environment in the nurturing of creativity can not be ruled out.

Creativity is more important now than ever before. This is because, creativity is a useful and effective response to evolutionary changes. Creativity is usually tied to original behaviour, and indeed, originality is necessary for creativity, but it is not sufficient. Creativity is a syndrome or complex (Albert & Runco, 1989; Mackinnon,
1983; Mumford & Gustafson, 1988), and flexibility is an important part of it. The flexibility of creative persons is what gives them the capacity to cope with the advances, opportunities, technologies and changes that are a part of our current day-to-day lives.

Creativity is not, however, just a concern and target for individuals. Its benefits are just as clear for society and culture (Simonton, 1991). Creativity plays an important role in technological advance, in the social and behavioural sciences, and in the humanities and arts (Dudek, 2003). Because of its role in innovation and entrepreneurship, creativity has become one of the key concerns of organizations and businesses [Runco, 2004].

Creativity is a departure from the stereotyped, rigid and closed thinking. It encourages and demands complete freedom to accept and express the multiplicity of responses, choices and lines of actions. It is a kind of adventurous thinking, calling a person to come out in the open to express himself according to his will and to function unrestricted by routine or previous practice.

Creativity and intelligence do not necessarily go hand-in-hand. Research findings have demonstrated that the intelligence and creativity have only a low correlation (Ebel et al., 1969). One is not the essential or necessary pre-requisite of the other. But a minimum level of intelligence is a necessary precondition for successful creative expression. This is of course on the assumption that there is a cut-off score of I. Q. around the normality above which aforesaid relationship holds good (Deshmukh, 1977). After presenting a thorough review of literature Torrance (1967) summarizes the correlational information about creativity and intelligence relationship as revealed in various studies. He found that the relationship between creativity and intelligence is low. It shows that it is not necessary for a highly creative person to have high intelligence. Again, the person with low intelligence may almost be high creative. On the other hand a highly intelligent person may not be highly creative.

Similarly, there is no significant correlation between an individual’s creative talent and his achievement in the school. One may be creative but score quite low on achievement tests and a topper in school may show little or no creative output.

Creativity requires creative individual to be more sensitive to the demands of a
problem than the evaluation of his social environment. The creative individual is more inner-than outer orientated. He likes to utilize his energy and potential more for the satisfaction of his creative urge than to care for the pleasant security of positive peer approval. It is for this reason that the creative individuals are not very sociable [Mangal, 2005].

Some indicators of creativity belong to both intellectual as well as non-intellectual categories. These indicators are necessary to identify the creative persons. The indicators of creativity are as follows:

- **Sensitivity and awareness**: As compared to others, the creative person is more open and sensitive to his environment. Many things that strike him are missed by others. However, his interests may gradually be limiting to a few selected fields as he grows older. He shows curiosity about events, ideas and actions taking place in his surrounding environments.

- **Fluency**: The creative child is usually fluent in ideas, whether the medium of his expression is verbal or non-verbal. Such a child produces many more ideas on a question or a problem than the ordinary students of his age or class.

- **Flexibility**: The creative child is a flexible thinker. He can think of many unusual uses of a thing that most children may not think. He is also to make use of a variety of approaches to solve a particular problem.

- **Originality**: This is the most important indicator of creativity. It includes such abilities as the capacity to produce unusual ideas, solve unusual problems in unusual ways and use things or situations in an unusual manner. His suggestions are novel as well as useful.

- **Elaboration**: Another indicator of creative potential is the ability to go into details. A creative child can describe a problem in details.

- **Curiosity**: The creative child has unending curiosity about the matter, its existence, causes and consequences. A creative child is always seeking
information and he is a keen observer.

- **Scepticism, non-conformity and independence in thinking** : The creative person is never satisfied with the things as they are, but always tries to improve upon them. Being original, divergent and independent in his thinking, he becomes sceptical of the old ideas and welcomes the new ones. He becomes a non-conformist and unconventional in his approach.

- **Persistence** : The creative person has the tendency to be fully absorbed in his work. He accepts challenges and shows interest in solving difficult tasks and problems. He is found to work hard, long time even at odd hours.

- **Risk-taking** : The creative child has the tendency to take calculated risks because of being self-confident and independent thinking. He enjoys the meeting of challenge and expressing new ideas. He can take chances to experiment and is not afraid of failures.

- **Humour** : A high sense of humour is another important indicator of creative potential. In a comparative study of high creative and high I. Q. groups, the highly creative students were found to be significantly more humorous than the high I. Q. students.

Creativity is not a unitary trait but a complex of so many discrete abilities and personality qualities. Potentials for creative production in different field are not same in quality and quantity. Creativity to the artist is the ability to evoke an emotional mood.

To the architect, creativity is the ability to evolve new approaches, forms and new materials. To the scientist, creativity is the ability to explore new way of extending knowledge and so on.

1.4 **Development of Creativity**

There are two different views regarding the development of creativity. One view is that all mental abilities are hereditary and can not be developed
(Galton, 1869), while the other view describes that mental abilities are kinds of skills which can be developed through appropriate education and training (Guilford, 1962; Parnes and Brunelle, 1967; Torrance, 1972; Rose and Lin, 1984).

Torrance (1967) is of the opinion that heredity does not place limits upon creative development and achievement. Creative abilities are inherited to the extent that a person inherits his sense organs, peripheral nervous system and brain. How these abilities develop and function, however, is strongly influenced by the way the environment responds to a person’s curiosity and creativity needs. It indicates that the environmental influences are more important in the development of creativity. Even if we assume that creative thinking abilities are hereditary, the expression of creative potential will depend upon the environmental influences. It means that the degree of creative expression can be increased by the environmental manipulation [Gupta, 2006].

Torrance (1962), reviewing a number of studies on the growth of creativity and findings of many studies conducted by himself at Minnesota, has described the length of development of creative abilities. The following are some general conclusions drawn on the basis of these studies:

• **Ages Two to Four**: During the two-to-four year old period, the child learns about the world through direct experience, and repetition of his experiences in verbal and imaginative play. He thrills over the wonders of nature. His curiosity about his environment continues, and he explores it in his own unique way. The child needs the freedom to explore, helps of parents to remove obstacles and opportunities for doing things.

• **Ages Four to Six**: Ligon (1957) and his associates say that the typical child from four to six has a good imagination but they do not make any observations about a lessening of imagination which other have found at about the middle of this period. At this age, he starts to become aware of the feelings of and begins thinking how his actions will affect others. The kindergarten period is very much crucial.

• **Ages Six to Eight**: According to him, the creative imagination of the child
between six and eight takes a turn towards realism to the extent that he tries to reproduce details even in play. His curiosity continues to develop and his school experiences are challenging and rewarding. Children enjoy creating characters and making others guess who they are. They should be encouraged to go as far as they can on a project work with their new ideas.

- **Ages Eight to Ten**: The child between eight to ten is increasingly able to use a variety of skills in being creative and can discover ways for using his unique abilities creatively. He likes to identify with heroes to use his imagination and other skills to help his friends. He needs opportunities to express his originality and ingenuity.

- **Ages Ten to Twelve**: Artistic and musical aptitudes are developing rapidly at this age. The child of this ages should be given opportunities to explore, to build, to make, to read and to communicate to others about his experiences. The child needs to test out his ideas and skills.

- **Ages Twelve to Fourteen**: The twelve-to-fourteen year old youth tends to be concerned with the activities of the moment and rarely plans for the future. During this stage, gifted children produce remarkable performances in imaginative, artistic, musical, and mechanical fields. The youth feels insecure, however, because of changes in his physical and emotional make-up and a growing strangeness in interpersonal relations. It is a time to give him experience in making decisions and carrying them out.

- **Ages Fourteen to Sixteen**: Between the ages of fourteen and sixteen much of the imaginative activity seems to be focused on a future career. Adventure is still the keyword for all phases of life for both sexes. The youth is able to see that there are no absolute solutions to some problems but he has not yet learned how to apply creatively the principles he has learned about right and wrong.

- **Ages Sixteen to Eighteen**: The youth of this stage, needs to give his imagination
full rein, as he sorts what is and is not important, according to Ligon (1957). He can learn to channel emotional energy creatively, solve problems and participate more vigorously in groups. Various tests of interest, abilities and attitudes toward life can be useful. The concept that emotional energy can be used creatively or destructively should be introduced and tested. After High School creative development is not so remarkable [Torrance, 1969].

**Necessity of Early Detection of Creativity:**

Researchers have shown that unless detected and nurtured at an early age, many of the capabilities and talents either go waste for ever or, if the attempt is made to cultivate them later on, they can not be developed fully. It is very essential, therefore, that a search for creative potential in children is made from the earliest possible stage.

Perhaps the most convincing argument in this context seems to emerge from an analysis of the developmental trend of creative potential. Although the results of various studies including Indian studies concerning developmental stages of creativity have varied in results, a general trend is to be noted. Whenever creativity is not identified at the early stage and opportunities for creative expression and development were lacking, there was a drop in the developmental curve. This phenomenon of slump in creative thinking has been attributed to lack of proper identification and opportunities.

### 1.5 Environment and Creativity

Development of creativity needs favourable environment. If the child is provided with conducive environment to the development of creative potential, his creativity can develop to the maximum. A positive environment or situation that is open, democratic and free may be said to contribute positively to the release and development of creative potential. On the other hand, a closed society, culture or situation may act as a strong deterrent to the development of initiative within the individual. Arieti (1976) proposed the concept of creativogenic society to emphasize the influence of culture and environment on the development of creativity. According to him, the creativogenic society or environment is distinguished by its lack of
emphasis on immediate gratification, its tolerance for and interest in divergent points of view, and its use of incentives and rewards for creativity.

There is a need for properly planned, deliberate and conscious efforts on the part of teachers, parents, members of the family, Government as well as the children themselves for the appropriate nurturing and stimulation of the creative urge and potential. Therefore, it should be ensured that children are provided with the environment and facilities conducive to the nurturing and stimulation of all that which is helpful in the development of creativity, and qualities like originality, flexibility, fluency, divergent thinking and sensitivity [Mangal, 2005].

Development of creativity depends upon many environmental factors particularly related to home, school and society. Home is a social unit that exerts the greatest influence on the development of the child’s behaviour. At home, parents are usually the most important persons in building the psycho-social climate of the entire family. Their attitudes, values, and nature of interaction with the child are parts of home environment.

1.6 Family Environment and Creativity

Many research studies on creativity show that families play a very important role in the realization of promise and potential (Bloom, 1985). Ellermeyer (1993) reminds us that, “parents can directly influence the development of creativity in their children by promoting fantasy in play and curiosity in the early childhood years. Parents of creative pre-schoolers are generally conceptually abstract thinkers, patient, flexible, open-minded, insightful and afford their children a high degree of independence”. The following environments or factors are conducive to the development and nurturance of creativity of the children:

- Non-authoritarian attitudes of parents are needed to develop their children’s creativity. When parents open-minded, welcome different opinion on a particular problem, when they neither insist on conformity nor criticise children for expressing new ideas or doing new things and discuss creative efforts with children, creativity flourishes.
- Emotional support at home, especially during early ages, can facilitate the
expression and development of creativity. Parents will reduce the fearfulness and anxiety on their part to help them in creative thinking.

- Parents should give their children the freedom to explore, think, act, experiment and express their views and feelings independently.
- Parents may try to help their children to engage in creative activities, provide support to different new and unusual ideas.
- Discipline should not be very strict to aid creative expression but it must be consistent.
- Parents first need to find out the field in which their child shows a fairly good amount of creativity and they can provide a variety of creative experiences related to the concerned area.
- Parents need to express their happiness when unusual curious questions come from their child who demands answers, explanation as well as elaboration. To strengthen creative thinking of their child, parents may appreciate or give material rewards also.
- Parents should give a variety of sources and situations to their child in the field of his interest and hobbies.
- Some research findings show significant positive relationships between creativity and role-models. The child may accept and internalise the qualities of his role models.

Deshmukh (1977) has listed four type of activities, namely; **searching**, **organizing**, **originating**, and **communication** for creating a conducive environment for the development of creativity. Torrance (1961) has emphasized reward as a crucial factor in maintaining creative atmosphere. He has given five principles for rewarding creative thinking:

1. Treat unusual questions with respect,
2. Treat unusual ideas with respect,
3. Show children that their ideas have values,
4. Provide opportunities for self-initiated learning and give credit for it.
5. Provide periods of non-evaluated practice.
On the other hand, some factors are against the creativity nurturing or development. These are anti-creativity factors which are as follows:

- Harsh and forced discipline.
- Indifference to creative efforts.
- Forcing students to believe in what the teacher/parents say.
- Giving so much homework that students are unable to think over problems.
- No scope for independent study.
- Discouraging students when they think divergently.
- Providing negative reinforcement when students express opinions against teacher’s views.
- Discouraging questions from students.
- Assuming all students to be alike.
- Group pressures to conformity.
- Encouraging intelligent students only.
- Monotonous classroom activities and assignment.
- Over dependence on guidebooks and evaluation system in formal education.

One or more of these anti-creativity factors may block the divergent thinking processes. Therefore, these should be removed as far as possible.

Family environment consists of its several components, such as, family structure, socio-economic status, family tension, interpersonal relationship among the members, stress and anxiety of the members etc. Most of them are created by and depended on the activities of the parents or major family members. Therefore, psycho-emotional climate of the families are very different for different families. This situation or condition affects the abilities of the child, especially, in the development or nurturing the creativity.

1.6.1 Socio-economic Status and Creativity

A child is born and brought up in the socio-emotional climate of the family. With the natural growth and development of the child, the innate creative potential obtained by heredity is gradually being unfolded or developed if the emotional climate

Runco, M. A. (2004) has described the influence of Socio-economic Status (SES) on creativity. He said that unlike academic success, creativity seems to flourish in larger families. The reason for this may be that children in larger families spend more time without supervision and thus need to use their own imaginative skills to remain entertained or it is a result of frequent and playful child-child interaction in larger family.

Creative thinking is related to socio-economic status, for larger families tend to come from lower socio-economic levels, they may then have fewer toys and environmental distractions. They then could be creative in finding ways to play which increases their original thinking. Again, more siblings in the family teach them to share, divide and play in variety of ways. So, it helps to develop flexibility in their thinking.

Dudek et al. (1993) shows that socio-economic status (SES) contributed to creative thinking during an individual’s developmental years, with higher socio-economic status being beneficial to creativity. Though “necessity is the mother of invention”, the alternative – that some necessities are common in lower SES levels and stimulate creative thinking – has not been supported empirically, at least not directly.

Families communicate cultural values to their children, and are responsible for their socialization and culturalization. In a sense, families channel and select culture for their children (Albert, 1991).

Socio-economic status is relevant to creativity and its development in parts because socio-economic status determines what kinds of experiences and resources will be available in the family. Additionally parental education is correlated with family socio-economic status. Parental education by itself plays a large role in
development of creativity. Socio-economic status may also determine how wide range of experiences a child will have in travelling or in reading books.

1.6.2 Family Structure and Creativity

Naturally, the activities and attitudes of parents toward the children are not same in the family. Their managing power, leadership attitude, style of family administration are also different. So, the structure of the family influences the family environment as well as the creativity of the children. John, C. D. (1988), Runco, M. A. (2004) have studied on creativity in relation to family size and family structure. Nijhawan, H. K. (1972) has taken Family Structure as an independent variable for the study of anxiety in school children. She classified the family structure in five categories, namely; Husband Dominance, Wife dominance, Autonomic, S syncratic co-operative and Syncratic division of functions.

Most of the research works in the area of family background seem to focus on family structure. The relevant structural variables include birth order, family size, number of siblings and age gap. Sulloway (1996), has shown that middle children are the most rebellious and are therefore potentially creative (Gaynor and Runco, 1992).

Albert and Runco (1989) reported that the autonomy within a family, not just the number of siblings or family structure, could dramatically influence creativity. Very likely, family structure has an impact on development of creativity because it determines family processes.

1.6.3 Family Tension and Creativity

A healthy family environment provides various scopes for practicing and nurturing creativity in the children. But when the parents suffer from various mental stress and tension, their attention, interaction and care to the children must be minimized. Again, according to Rhodes (1997), “A stressful setting can become the catalyst for potentially talented individuals to meet their deficiency needs for attention, love and approval through deficiency – creative efforts providing self-expression and rewards”.

Stressful family circumstances may propel a child to seek refuge in safe, controllable intellectual activities or to use a creative activity as an outlet for emotions
(Ochse, 1993, Piirto, 1992) and they may force an earlier psychological maturity for the child (Albert, 1978, 1980). Childhood challenges may prepare individuals to cope with the intellectual tensions and marginal existences that are characteristic of highly creative people (Feldman, 1994, Gardner, 1994).

Again, Therival (1999) asserts that stress and tragedy are not essential elements of creative productivity. He offered a model of creativity that includes the following components: genetic endowment (G), parental or other “confidence building” assistances (A), and misfortunes (M). According to Therival, creativity can develop in individuals who experience great misfortunes as long as there are also great assistances present. He distinguished between creators who are dedicated (have high levels of genetic endowment, many assistances and no major misfortunes) and creators who are “challenged” (have high genetic endowment, some assistances, and some misfortunes). Both produce creative work, but the “challenged” personalities are more overtly driven to prove themselves and to receive recognition. Most families experience more moderate levels of stress and tensions – more aptly called challenges – and it appears that these can be positive influences for children, depending upon how they are interpreted and handled by families.

### 1.6.4 Freedom of Thought and Actions and Creativity

Freedom of thought and actions enjoyed by the child in the family may be considered as an aspect of family environment. Parents should help the child to find his own identity and allow him for open expression of ideas and independent thought; reduce parent-child identification, but not necessarily affiliation or affection, provide support in the presence of challenges, which aids in the development of creativity and good mental health. Parents need to establish and maintain bonds with children, also allow them autonomy, independence and psychological and emotional space.

Studies suggest that an important family-environment factor is the degree to which the family creates an atmosphere where children are free to develop a unique identity and have their own individual thoughts and express them freely. Individuals who come from such families are more likely to be very creative, as well as highly competent, in their work. Such families foster creativity and intellectual risk taking.
The circumstances within homes and families that create environments conducive to the development of independent identities and thought are many and varied. They include anything that results in a reduction in parent-child identification, an “emotional space” between parent and child, lower levels of parental monitoring of children, and less conventional socialization of children by parents. These conditions make the children more independent, autonomous, and less sex-stereotyped [Olszewski-Kubilius, 2001].

1.6.5 Gender Difference and Creativity

In Indian Family culture, unfortunately, yet, boys and girls are not treated in the same way in various aspects. Hence, children’s creativity development may be varied with their gender difference. A few studies have concerned themselves with gender differences in creativity, the results were not equivocal. Prakash (1966), Raina (1969) reported that boys were more creative than girls. However, Pareek (1966), Hussain (1974), Hargreaves (1977) found no difference between the creativity of boys and girls. Singh (1978), on the other hand, found that girls were better than boys on tests will semantic content.

Raina (1971) and Goyal (1974) found that females were significantly superior to males only on fluency and flexibility dimensions of creativity. Again, Singh (1978), reported that female students were superior to male students in fluency and originality dimensions of creativity.

Male students were found to be significantly superior to their female counterparts on verbal creativity (Prakash, 1966, Gagneja, 1972, Jain, 1971, Sharma, 1979). On the non-verbal creativity, too, the male students were significantly superior to female students. Passi (1972) with respect to different dimensions of creativity, reported that male students were significantly higher than female students in Originality.

Sex differences are not always found in assessment of creativity, though historical analyses do uncover differences that may reflect bias and favoritism. Reis described how the developmental and career paths of women are more diverse than those of men. She also concluded that relationships play a larger role in women’s
creative efforts than in men’s creative efforts.

Sarkar (1994) has found that sex was a contributing factor to creativity and its different components. Boys and girls mostly differ from one another on the scores of creativity. He also found that boys are superior to girls in creativity scores. Thus, overall reviews regarding gender difference in creativity do not make any conclusion.

1.7 The Present Problem

Many research findings have consistently shown that all children have the potential to think creatively and the development of creativity has been influenced by the factors of environment. Among the three types of environments (Family, School and Social environments), family environment has much influences on the development of creativity in the children. Out of several factors of family environment, only one or two factors have been considered in most of the research works to establish the relationship with creativity. Moreover, in that cases, creativity of the children has been assessed either verbal form or non-verbal form of tests. Again, if the creative productions are the results of family environment-factors, how much do they contribute to it? Further more, in this society how are the factors of family environment correlated with creativity? The answers were not clear to the present researcher.

The present researcher considered Socio-economic Status, Family Tension, Family Structure, Freedom of thought and actions – as the aspects of family environment to find out the relationships with creativity. Also, the creativity of the children had been assessed by using both verbal tests and non-verbal tests of creativity.

Again, between boys and girls, who would be more creative in this context?

In this society, which aspect of family environment would be the greatest contributor to fluency, flexibility and originality component of creativity. Hence, considering the above issues, the title of the present research was as follows:

“A Study on Creativity in Relation to Some Aspects of Family Environment”. 
1.8 Statement of the Problem

The main purpose of this study was to find out the relationship between components of creativity and aspects of family environment (Socio-economic Status, Family Tension, Family Structure, Freedom of thought and actions) of school going students in the Districts of Nadia and 24 Parganas(North)- where various kind of people live. Thus the problem was stated as:

“A Study on Creativity in Relation to Some Aspects of Family Environment”.

1.9 Rationale of the Problem

Creativity is one of the most highly valued qualities of human beings, because its contribution to society is enormous.

So long, studies on creativity have been done with the primary focus on the intellectual aspect of personality or any other trait of personality. A few research works have been conducted on creativity in experimental aspect, that is, training creativity or development of creativity. But how the family environment influences creativity in children and what relationship exists between creativity and various aspects of family environment were not properly explored. This type of research was important in the sense that it might help to create suitable family environment for nurturing creativity in children.

Economic condition is an important determinant of family environment. At the same time, social status of an individual leads him to react in a particular way. So, Socio-economic Status of a family reflects the whole environment of the family proportionately. Hence the researcher considered Socio-economic Status as the variable for this study.

Again, family structure may influence the creativity of the children. Structures of the families are not same and the environment of such families would be different in nature. So, a relationship may exist between family structure and the different components of creativity of the children.

Family tension may affect the family environment. Parents who suffer from various stress and tension may give less attention and care to their children for fostering creative potential in them. Again, a few studies demand that a particular
level of family tension is favourable for nurturing creativity in the children.

Freedom of thought and actions enjoyed by the children in the family may be related with the components of creativity. Freedom to play, freedom to make various things, models may increase their flexibility and originality components of creativity.

In these regards, the present researcher considered Socio-economic Status, Family Structure, Family Tension and Freedom of thought and actions as the independent variables for this study.

According to Piaget (1952), the formal operational stage of intellectual development in children comes at the age of 11 and above. This is the stage when the child can think in abstract terms, follow logical propositions and reasons for hypothesis. He can isolate the elements of a problem and systematically explore all possible solutions to problems. So, the researcher considered Class VIII and Class IX students as samples for this study.

Each of the two districts – Nadia and 24 Parganas (North) of West Bengal has a diversified area which includes a part of A-1 city, sub-urban areas, municipalities, many villages, industrial areas, business markets, rivers and fertile cultivated lands. Various types of professions are found among the people of each district. Environment of these families, no doubt, are very different in all respects. So, when the students of these families would be treated as sample it must be of different types. Hence, the researcher considered all the students of Class VIII and IX of Bengali medium schools of two districts as the population of the study.

1.10 Objectives of the Study

The objectives of the present study were framed as follows:

1) To assess the verbal and non-verbal creativity of all the students in terms of fluency, flexibility and originality.
2) To study the gender difference in different components – fluency, flexibility and originality of both verbal and non-verbal creativity.
3) To study the difference between Freedom and Restriction group boys in fluency, flexibility and originality of both verbal and non-verbal creativity.
4) To study the difference between Freedom and Restriction group girls in fluency, flexibility and originality of both verbal and non-verbal creativity.

5) To study the difference between High and Low Socio-economic Status group boys in different components – fluency, flexibility and originality of both verbal and non-verbal creativity.

6) To study the difference between High and Low Socio-economic Status group girls in different components – fluency, flexibility and originality of both verbal and non-verbal creativity.

7) To study the difference between High Family Tension and Low Family Tension group boys in fluency, flexibility and originality of both verbal and non-verbal creativity.

8) To study the difference between High Family Tension and Low Family Tension group girls in fluency, flexibility and originality of both verbal and non-verbal creativity.

9) To study the difference between the boys group of Autonomic family and Syncratic co-operative family in fluency, flexibility and originality of both verbal and non-verbal creativity.

10) To study the difference between the girls group of Autonomic family and Syncratic co-operative family in fluency, flexibility and originality of both verbal and non-verbal creativity.

11) To study the relationship between Freedom of students and different components of both verbal and non-verbal creativity for boys.

12) To study the relationship between Freedom of students and different components of both verbal and non-verbal creativity for girls.

13) To study the relationship between Socio-economic Status and different components of both verbal and non-verbal creativity for boys.

14) To study the relationship between Socio-economic Status and different components of both verbal and non-verbal creativity for girls.

15) To study the relationship between Family Tension and different components of both verbal and non-verbal creativity for boys.
16) To study the relationship between Family Tension and different components of both verbal and non-verbal creativity for girls.

17) To develop a Multiple Regression Equation of Total Fluency on Freedom of students, Socio-economic Status and Family Tension.

18) To develop a Multiple Regression Equation of Total Flexibility on Freedom of students, Socio-economic Status and Family Tension.

19) To develop a Multiple Regression Equation of Total Originality on Freedom of students, Socio-economic Status and Family Tension.

20) To explain an ideal family environment for better development of creativity in children.

1.11 Significance of the Study

Creativity is one of the most important qualities of human beings, because it alone can enhance development in all directions and lead to social progress. The countries where the development of creativity in individuals has been encouraged are now in better positions in respect of economic prosperity and national development.

Traditional education system always emphasizes on the ability of convergent thinking rather than the ability of divergent thinking. So, most of the parents, the teachers and the other family members always try to encourage and reward for better development in convergent thinking such as memorizing the facts and obtaining better marks in the examination and not for divergent thinking. But, now it is very important to make understand the people about the necessity of development of divergent thinking as well as creative thinking. At the same time, they should know what kind of family environment is favourable for fostering creative potential in their children in this social perspective. Again, which factors of the family make an ideal environment for promoting creativity in the children, should be determined. Therefore, establishing the relationship between aspects of family environment and components of creativity are very important. From this points of view, the study has got immense significance.
1.12 **Operational Definitions of the Terms Used**

The operational definitions of the terms used in this study were given below for proper understanding:

i) **Creativity**: In this study, creativity operationally defined as the ability to bring something new into given situations or problems. It includes person’s behavioural characteristics like fluency, flexibility and originality.

ii) **Fluency**: Fluency is the ability of an individual to produce a large number of ideas within a particular time period. When the responses are in words, it is called verbal fluency and when the responses are in figural form, it is called non-verbal fluency.

iii) **Flexibility**: It is the ability of an individual to produce a variety of different ideas within specific time period. In case of word responses, it is called verbal flexibility and in case of figural form, it is called non-verbal flexibility.

iv) **Originality**: It is the ability of an individual to produce unusual ideas or rarer responses. Verbal originality score is obtained from the word responses and non-verbal originality score is obtained from the figural responses.

v) **Aspects of Family Environment**: In this study, aspects of family environment are defined as the determinants or factors which influence the family environment. It also includes the scope created in the family environment. In this study, it includes Socio-economic Status of the family, Family Structure, Family Tension and Freedom of thought and actions enjoyed by the student in the family only.

vi) **Socio-economic Status**: It is the status of the family regarding economic condition and social status. In this study, it is scored on the basis of occupation of parents, monthly income, educational qualification, condition of the home and materials possession.

vii) **Family Structure**: In this study, family structure is defined, in the psychological
perspective, as by whom does the family condition maintained, managed and controlled. It depends on the facts – ‘who did’ and ‘who decided’ about the various household activities. There are five types of family structures – Father Dominant, Mother Dominant, Autonomic, Syncratic Co-operative and Syncratic Division of Functions.

viii) Family Tension : Family Tension is defined as the tension existed between the parents of the child. This is created by the disagreement between the parents of the child about the various family activities.

ix) Freedom : Freedom means freedom of thought and actions enjoyed by the child in the family.

1.13 Hypotheses of the Study

Criterion of creativity is an independent measure of Fluency, Flexibility and Originality under both verbal test and non-verbal test.

Keeping in mind the objectives of the present study and findings of the review of related studies, the researcher formulated the following hypotheses :

\[ H_1 \]: There would be no significant difference between boys and girls in Fluency scores of verbal and non-verbal creativity.

\[ H_2 \]: There would be no significant difference between boys and girls in Flexibility scores of verbal and non-verbal creativity.

\[ H_3 \]: There would be no significant difference between boys and girls in Originality scores of verbal and non-verbal creativity.

\[ H_4 \]: There would be significant difference between Freedom and Restriction group boys in Fluency, Flexibility and Originality scores of verbal and non-verbal creativity.

\[ H_5 \]: There would be significant difference between Freedom and Restriction group girls in Fluency, Flexibility and Originality scores of verbal creativity.
H₆ : There would be significant difference between Freedom and Restriction group girls in Fluency, Flexibility and Originality scores of non-verbal creativity.

H₇ : There would be significant difference between High and Low Socio-economic Status group boys in Fluency, Flexibility and Originality scores of verbal and non-verbal creativity.

H₈ : There would be significant difference between High and Low Socio-economic Status group girls in Fluency, Flexibility and Originality scores of verbal and non-verbal creativity.

H₉ : There would be significant difference between High Family Tension and Low Family Tension group boys in Fluency, Flexibility and Originality scores of verbal and non-verbal creativity.

H₁₀ : There would be significant difference between High Family Tension and Low Family Tension group girls in Fluency, Flexibility and Originality scores of verbal and non-verbal creativity.

H₁₁ : There would be significant difference between the boys groups of Autonomic Family and Syncratic Co-operative Family in Fluency, Flexibility and Originality scores of verbal creativity.

H₁₂ : There would be significant difference between the boys groups of Autonomic Family and Syncratic Co-operative Family in Fluency, Flexibility and Originality scores of non-verbal creativity.

H₁₃ : There would be significant difference between the girls group of Autonomic Family and Syncratic Co-operative Family in Fluency, Flexibility and Originality scores of both verbal and non-verbal creativity.

H₁₄ : There would be significant relationship between Freedom of students and components of creativity (Fluency, Flexibility, Originality) of both verbal and non-verbal creativity tests for boys.

H₁₅ : There would be significant relationship between Freedom of students and components of verbal creativity (Fluency, Flexibility, Originality) for girls.
H_{16} : There would be significant relationship between Freedom of students and components of non-verbal creativity (Fluency, Flexibility, Originality) of both verbal and non-verbal creativity tests for girls.

H_{17} : There would be significant relationship between Socio-economic Status and components of verbal creativity (Fluency, Flexibility, Originality) for boys.

H_{18} : There would be significant relationship between Socio-economic Status and components of non-verbal creativity (Fluency, Flexibility, Originality) for boys.

H_{19} : There would be significant relationship between Socio-economic Status and components of creativity (Fluency, Flexibility, Originality) of both verbal and non-verbal creativity tests for girls.

H_{20} : There would be significant negative relationship between Family Tension and components of creativity (Fluency, Flexibility, Originality) of both verbal and non-verbal creativity tests for boys.

H_{21} : There would be significant negative relationship between Family Tension and components of creativity (Fluency, Flexibility, Originality) of both verbal and non-verbal creativity tests for girls.

H_{22} : Freedom of students, Socio-economic Status, Family Tension would be significant predictors of Total Fluency.

H_{23} : Freedom of students, Socio-economic Status, Family Tension would be significant predictors of Total Flexibility.

H_{24} : Freedom of students, Socio-economic Status, Family Tension would be significant predictors of Total Originality.

1.14 Delimitations of the Study

In order to conduct the study, the researcher delimited the planning of his investigation which were stated below:

Population

All the students of class VIII and IX of Bengali medium schools under West Bengal Board of Secondary Education of districts Nadia and North 24 Parganas, West
Bengal, were the population for the present study. Only Government aided schools were considered in this study. Thus, English or Hindi medium schools under West Bengal Board of Secondary Education or any other Board, private schools were not included in this population.

**Sample**

The study is limited to the sample of 372 school going students of class VIII and class IX selected from eight different types of schools of district Nadia and North 24 Parganas.

**Schools**

Total eight Bengali medium schools were selected out of which one Boys’ school, one Girls’ school and two Co-education types schools from each of the two districts were considered only.

**Aspects of Family Environment**

In this study, only four aspects of family environment were considered. They were as follows :

i) Socio-economic Status

ii) Family Structure

iii) Family Tension

iv) Freedom of thought and actions.

**Components of Creativity**

Only three components of creativity had been considered in this study, such as –

i) Fluency

ii) Flexibility

iii) Originality
Form of Creativity Test

Considering time duration of the tests administration in the classroom, intermediate form of Sarker’s Creativity Test had been used for assessment of creativity of the students in this study.

Gender

Stratification with respect to gender is necessary for comparative study. For this reason, the researcher included both boys and girls in the sample of the study.