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CHAPTER II

CONCEPTUAL ANALYSIS

Individuals differ from one another in many aspects. Modern psychology reveals that individual differences manifest in physical, emotional, intellectual, social and cultural spheres. Variations and deviations in human traits are observed even among the normal children. An exceptional individual, however is one in whom these variation reach the extreme. The deviation may be positive or negative. Such children are so exceptionally inferior or superior to the normal children in terms of physical development, mental ability, social behaviour and emotional reaction and faces difficulties in making a successful adjustment to people and situations. According to Cruickshank (1955)¹ "an exceptional child is he who deviates physically, intellectually, emotionally and socially so markedly from normal growth and development that he cannot be benefited from a regular classroom programme and needs special treatment in school". Kirk (1970)² has given a comprehensive definition, "An exceptional child is he who deviates from the normal or average child in mental, physical and social characteristics to such an extent that he requires a modification of school practices or special educational services in order to develop to his maximum capacity". According to Telford and Sawrey (1977)³ "The term exceptional children refers to those children who deviate from the normal in physical, mental, emotional, or social characteristics to such a degree
that they require special social and educational services to develop their maximum capacity.

**GIFTEDNESS DEFINED**

As there are many kinds of talented and gifted children, there is no real agreement as to who is the gifted child. The reason is that the degrees of giftedness or talents are quite different. The terms giftedness and talents are used synonymously. Gifted children have been included in the group of exceptional children needing special attention because they are superior in intelligence and deviate markedly from the normal children. They require special training, education and adjustment. Gifted children come from all strata of society, including the very poor and the minority communities such as the scheduled castes and scheduled tribes, because high intellectual qualities or creative abilities are not confined only to the economically or socially superior groups. They come from all social, ethnic, religious, rural or urban groups, in high or low scales of social and economic positions. Some of these children live in low scales of social and economic positions. Such children living in an unstimulating environment may not be noted. They remain potential rather than actual contributor.

Psychologists have defined giftedness on the basis of I.Q., Terman classified 140 IQ as the lowest mental ability for a
gifted child. Children having an IQ of 140 and above are said to be gifted children. However, philosophers of 17th century like John Stuart Mill described gifted children as having IQ between 190 and 200. Hann and Havighurst have reported 1 per cent of the school children as geniuses with high IQ and 10 per cent of the rest as gifted children on the basis of percentage. This classification is very general and varies depending on the socio-economic status, cultural background and educational status.

According to Marland (1972) the term "gifted and talented children" means children and whenever applicable, youth who are identified at the pre-school, elementary or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capabilities in areas such as intellectual, creative, specific, academic, or leadership ability or in the performing and visual arts, and also who by reason thereof, require services or activities not ordinarily provided by the school. Havighurst (1958) defines "The talented or gifted child is one who shows consistently remarkable performance in any worthwhile line of endeavour. The intellectually gifted can be identified in terms of the test scores or demonstrated performance, or as the upper 1 or 2 per cent of the general population as measured by intelligence and/or achievement test (Telford and Sawrey, 1977). According to Witty (1940) "the term gifted or talented stands for those whose performance is consistently remarkable in some potentially valuable activities".
Pasricha (1964)\textsuperscript{8} considers the gifted child is one who exhibits superiority in general intelligence or the one who is in possessions of special abilities of high orders in the fields which are not necessarily associated with high intelligence quotient.

**CHARACTERISTICS OF THE GIFTED**

Gifted children have been found to excell normal children of their age and even adults to an incredible extent. Most of such children later on turned out to be exceptionally reputed poets, musicians, philosophers, scientists, writers, lawyers, administrators, physicians, religious preachers and genius in several other fields and they have been found to differ from each other considerably. Certain features and traits, however, have been commonly observed amongst a majority of them.

According to Galton, Hollingworth and Taylor the mentally superior children excell in physical traits. The gifted, as a group, are slightly better than their average peers in most measures of physical traits (Terman et al, 1925\textsuperscript{9}; Hildreth, 1938\textsuperscript{10}; Miles, 1954\textsuperscript{11}). They tend to be taller, heavier and better looking. Furthermore, they tend to be superior in measures of strength of grip, leg strength, pumping, running and other motor activities involving either the whole body or part of it. Incidence of mortality and insanity are found to be low in case
of gifted children. During infancy, they walk, talk and read earlier than the other normal children.

**Intellectual Characteristics of the Gifted**

As reported by Kirk (1970)\(^{12}\) gifted children are more interested in abstract subjects such as literature, debate, ancient history, and less interested in practical subjects such as penmanship and manual training. Gallagher and Lucito (1961)\(^{13}\) compared the patterns of intellectual strengths and weaknesses on Wechler sub-tests for seven samples - three gifted, three retarded and one average ability. The gifted were strongest on the factor of verbal comprehension while they were poorest on tests relating to a perceptual organization factor. Thompson and Finley (1962)\(^{14}\) essentially replicated the Gallagher-Lucito study with larger samples of people and confirmed the results.

Case studies of intellectually gifted children have shown that they possess better standards than average children. Their reactions are quick and their progress is conspicuous. At an early age, they enter school and at school, they are much ahead of their class. Their activities in the classrooms are wide and varied. Their interests are also very diverse.

**Family Background and Social Characteristics of the Gifted**

According to Terman and Oden, the majority of the gifted were offsprings of intellectually superior parents, though
they come from all kinds of homes, ranging from the poorest to the best. Parents of the gifted were found to be better educated and the parents mostly belonged to professional and managerial occupations. Educational and economic conditions of their families were found to be superior. There is considerable evidence to assert that gifted students are more socially accepted than pupils from other intellectual levels. The gifted in regular classrooms are chosen more often than the average by his peers in socio-metric studies (Johnson, 1950; Miller, 1956). Kerstetter (1952) studied the social adjustment of students in special classes, and concluded that the gifted as a group were well adjusted socially. Miller (1957) investigated the question of whether students who had been accelerated (Young for grade placement) suffered social maladjustment. She found them to be socially well adjusted. Gallagher (1958) and Martyn (1957) found that the gifted rated as high as or higher than the average in popularity. They also appeared to be shy and hence keep aloof from the group. Lucito (1959) and Hottel (1960) suggest that the gifted have less need to conform to peer group pressures than average or retarded students.

Academic Achievement of the Gifted

Examination of the many research studies related to educational achievement indicates that the gifted, as a group, achieve well in most areas, so that versatility rather than one-sidedness is the rule. They also tend to have higher achievement
than the average in all school subjects regardless of the type of measures used. If school grades are used as a measure of achievement, the gifted were found to excel. They receive a larger proportion of A and B grades than the average group. Even youngsters who have been accelerated receive better grades than their older average classmates (Barnette, 1957; Justman, 1956; Shannon, 1957; Worchester, 1956). The gifted has a great deal of common sense and practical knowledge and perform difficult mental tasks and can progress very rapidly in academic field. The gifted are high achievers and found to score higher than their classmates of average intelligence in achievement tests. A gifted child often receives awards and scholarships for his high achievement.

**Personality and Emotional Characteristics**

Recent researches have reflected a positive and intimate relationship between giftedness and personality. The capacity of social adjustment of gifted children have been found to be much higher than that of the average child. The gifted are found to be outstandingly honest, dependable, original, self-reliant and possessing a number of other social traits which are desirable for leadership. It has also been observed that gifted children are impulsive, and self-confident. They are very much interested in aesthetic expression and reflective thinking, normally sensitive, resourceful, flexible and enthusiastic, and are persistent and confident. Emotional stability and adjustment
are the commonly observed traits of superior children. They are usually cheerful, prefer to face their difficulties and problems independently, make adjustment to persons, places and situations easily and are inclined to develop socially healthy emotional outlooks and attitude. Bonsall and Steffler, (1955)\(^2\) found that the gifted were superior to non-gifted on thoughtfulness, restraint, ascendance, emotional stability, objectivity and masculinity.

Terman and his associates conducted an intensive study of the mental, physical, social and emotional characteristics of over one thousand gifted children whose IQ's were above 140. The results of the study are summarized by Terman and Oden as follows:

1. The average member of our (gifted) group is a slightly better physical specimen than the child of average intelligence.

2. For the field of subject matter covered in our tests, the superiority of the gifted over unselected children was greatest in reading, language usage, arithmetical reasoning, science, literature, and the arts. In arithmetical computation, spelling and factual information about history and civics, the superiority of the gifted was less marked.
3. The interests of gifted children are many sided and spontaneous, they learn to read more easily and read more and better books than the average child.

4. As compared with unselected children they are less inclined to boast or to overstate their knowledge, they are more trustworthy under temptation to cheat, their character preferences and social attitudes are more wholesome, and they score higher on tests of emotional stability.

5. The deviation of the gifted subjects from the generality is in the upward direction in nearly all tests. There is no law of compensation whereby the intellectual superiority of the gifted tends to be offset by inferiorities along non-intellectual lines.

IDENTIFICATION OF THE GIFTED

The gifted can be identified on the basis of a number of psychological tests and techniques.

1. Mental Tests

Mental tests are based on individual differences in innate abilities to acquire, arrange and use facts as objectively as possible. An intelligence test score is a numerical appraisal of mental abilities required for performing a task that depends
on the exercise of intelligence. The IQ is conditioned to the test itself, to the cultural limitations, to the person who is administering the test and to the child's attitudes as well as his physical and emotional conditions at the time. At present the reliability of the best current tests of intelligence is between 0.90 and 0.95. While current tests of intelligence will not pick out all the mentally gifted children in a group, they are probably the most effective single instruments available for selecting the gifted.

Both the 'Individual test' and 'group test' of intelligence are used. Some of the popular intelligence tests used for identifying the gifted are:

(i) Alexander's battery of Performance Tests.
(ii) Bhatia Battery of Performance Tests.
(iii) Wechsler Bellevue Intelligence Scale.
(iv) Chicago Non-Verbal Test.
(v) Raven's Progressive Matrices Test.

2. Aptitude Test

The American Association for gifted children recommended that qualities other than IQ be included in the conception of giftedness and defined the gifted as "A person whose performance in any line of socially useful endeavour is consistently superior". This definition includes those who are
talented in art, music, drama and mathematics as well as those who possess a high level of mechanical and social skills or high abstract verbal intelligence. However, there is a controversy among psychologists about the aptitudes, their exact limits, their nature, and whether they are innate or acquired. The aptitude tests can definitely throw light at least on the nature of the abilities of the gifted. The value of such tests however depends in the accuracy in administration and interpretation of scores. The aptitude tests are significant in the identification of the gifted as the special abilities cannot be discovered readily through the use of the intelligence tests.

3. Reports of Parents

Reports by parents have considerable value in identification of the gifted. No one can hope to have as intimate a knowledge of a child's behaviour over as long a period of time as his parents. Terman and Oden have stated that early indications of superior intelligence most often noted by parents are quick understanding, insatiable curiosity, extensive information, retentive memory, large vocabulary and unusual interest in such things as number relations, atlases and encyclopedias. Early walking and talking and acquiring the ability to read without training during the pre-school period have also attracted the attention of parents of these children. Moreover, gifted children are likely to have parents who are themselves gifted or at least who are superior in intelligence, so they are likely to have more
insight into the ability of their children. However, the reports need to be verified as it cannot be denied that some parents are often biased and inaccurate in their observations.

4. Reports of Teachers and Professional Workers

The American Association for gifted children indicated that teachers fail to identify the gifted. This is because the teachers often are inclined to evaluate a child in terms of his school achievement. Few gifted are as educationally advanced as their ability warrants. Teachers also tend to overlook the factor of chronological age. A reaction to the personality of different children may influence the teacher’s evaluation of ability. In most foreign countries teachers are now being given criteria for recognizing deviations from physical and emotional health in school children. Ability to detect giftedness has become an important part of the teachers’ training programme in some of the advanced countries. In addition to teachers, physicians, school counsellors and psychologists can also help in the identification process. Recreation leaders and religious teachers can also help to recognize the gifted.

5. School Accomplishment and Achievement Tests

The belief that outstanding ability may invariably be reflected by superior accomplishment in school is wrong. Teacher estimates and school achievement can often be inaccurate. In every school grade there were children whose school achievement
in one or more subjects was rated as average or below for the grade, but whose achievement test scores showed them to be as much as two years above their grade norms in those same subjects. Standardized achievement tests are better than school marks.

CREATIVITY: THE NATURE AND CONCEPT

Probably the greatest challenge to the existing concepts of intelligence was presented by the emergence of divergent or non-conforming aspect upon the intellectual scene. Guilford (1950\textsuperscript{28}, 1959\textsuperscript{29}, 1962\textsuperscript{30}) holds that these abilities should be perceived as general in nature, as opposed to specific, and that they can be applied to great variety of tasks. They can no longer be viewed as the preserve of a few or be limited to aesthetic pursuits. Rather, they must be recognized as existing in many forms and in many different kinds of men.

Getzels and Jackson (1962)\textsuperscript{31} concluded from students' responses that, within four minutes following the presentation of a picture, divergent responses tended to be unrelated to the stimulus whereas convergent responses were stimulus oriented. The convergent thinkers tended to be more inhibited by the stimuli and presented conformity or 'expected' responses to the stimuli. Divergent students constructed less inhibited, more creative stories when presented with the same picture.
Creativity involves not one but many abilities or traits. Some of these abilities are fluency, flexibility, originality, elaboration, sensitivity to problems and openness to experience. Creativity differs from intelligence. The abilities involved in creativity are different in form than those involved in intelligence. Whereas intelligence involves convergent thinking, creativity caters to divergent thinking abilities among children.

In spite of the importance attached to creativity for the individual and the society, not much research has been done in the field of creativity till recently. Also, it is not defined properly. The main reason being the complexity and the multi-dimensionality of the concept.

Stein (1953)\textsuperscript{32} stated creativity as a process that results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time. The capacity of a person to produce compositions, products or ideas which are essentially new or novel and previously unknown to the producer is considered creativity by Drevdahl, (1956)\textsuperscript{33}. Torrance (1966)\textsuperscript{34} testified it as "the process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies and so on, identifying the difficulty, searching for solutions, making guesses or formulating hypothesis and possibly modifying and retesting them and finally communicating the results".
Wallach and Kogan (1965)\textsuperscript{35} defined creativity as "an individual's capacity or ability to generalize cognitive associations in quality and with uniqueness".

Guilford (1956\textsuperscript{36}, 1959\textsuperscript{37}, 1960\textsuperscript{38}) through his psychometric procedures has conceptualized creativity in terms of the mental abilities involved in creative achievement. According to him "creativity is the ability to go beyond the immediate solution, ability to redefine the problem or some part of it, ability to cope with ideas that are unusual and ability to change or having new approach to the problems". "Creativity is a generalized constellation of intellectual abilities, personality variables and problem solving traits" according to Ausubel (1963)\textsuperscript{39}. For Paplia and Old (1987)\textsuperscript{40} creativity is the "ability to see things in a new and unusual light, to see problems that no one else may even realize exist, and then to come up with new and unusual and effective solutions". Simpson (1922)\textsuperscript{41} defined creativity as the initiative which one manifests by his power to break away from the usual sequence of thought into an altogether different pattern of thought.

CHARACTERISTIC OF CREATIVE INDIVIDUALS

A great deal of research has been carried out by Guilford and others on the characteristics of creative persons. The intellectual, motivational and personality characteristic of
highly creative people are summarized by Taylor and Barrom. Taylor and Barrom (1972) listed seven different but related cognitive abilities in creative thinking as

(1) Sensitivity to problems
(2) Associative fluency
(3) Ideational fluency
(4) Spontaneous flexibility
(5) Adaptive flexibility
(6) Originality
(7) Redefinition

Studies have shown that, in addition to intellectual factors, creativity stems from a number of motivational factors such as inquisitiveness, persistency, thinking and toying with ideas, variety and independence, curiosity, tolerance of ambiguity and high energy and vast output of work.

Creative individuals according to Taylor are more stable, more feminine in interest and characteristic (especially in awareness of their own impulses) more dominant and self assertive, more complex, more self accepting, more resourceful and adventurous, more radical (Bohemian) more self-controlled, and probably more emotionally sensitive, and more introverted but bold.
Personality Characteristics of Creative People

The personality characteristics of creative individuals have been examined in a number of researches. Creative persons are self-directed, can tolerate ambiguity, display a bulldog tenacity, are somewhat free from conventional mores, are spontaneous, usually display a sense of humour, are flexible, are not neat, are often intuitive rather than logical, and may be seen as disorganized. They often appear playful, radical or eccentric and marginal to the society and they dislike tradition or authority, abhorring routine and organized tasks. In other words, creative persons tend to be unique and different. High self-esteem, positive self-image, self confidence and a sense of their own personal worth appears to be significantly related to creative behaviour. Problems are plenty in the life of the creative individual, but they do not allow problems to interfere with their creative production.

The personality traits of creative adolescents have also been analysed. Getzels and Jackson (1958, 1959, 1960, 1961) study of creative adolescents indicated that the high creatives made stimulus free themes, unexpected endings, humour and playfulness. They preferred to join independent and dissimilar elements together to produce new forms. They also enjoyed risks and uncertainty of the unknown. Sixty-two per cent of the creative adolescents preferred unconventional occupations, like adventure, inventor, writer, etc. Holland (1961) found
creative performance at high school level occurring more frequently among students who are independent, intellectual, expressive, social, consciously original and who aspire for future achievement. Hammer (1961)\textsuperscript{48} observed creative adolescent artists to have deeper feelings, greater original responsiveness, determination and ambition, preference to observer role, integration of feminine and masculine components, greater independence, rebelliousness, self-awareness, self expression, greater tolerance, emotional expression. Sharma (1975-76)\textsuperscript{49} stated the characteristics of creative students as cognitively complex, innovative, curious, risk taker, adventurer, original, initiative, imaginative, constructive, determination, desires to excell, discontented, independence in judgement, never bored, self-confident, sensitive, varied interest, and sincere. The inconsistent characteristic remained to be cognitively complex, fault finder, defines convention, visionary, impulsive, determination and independence of judgement, out of which the last three traits were less consistent than the former five.

According to Khiangte (1987)\textsuperscript{50} creative high school students were superior to the non-creative in abstract thinking. They were also found to be assertive, affected by feelings, tenderminded, placid, doubting, venturesome and outgoing. Dallas and Gaier (1970)\textsuperscript{51} reported that high creatives manifested greater independence, dominance, autonomy, unconventionality, broad interests and openness to feelings. Cashdan and Welsh
(1966)\textsuperscript{52} studied several hundred adolescents and reported that the creatives were independent, non-conforming, spontaneous and energetic. Although they were sensitive to the feelings of others, they did not allow this to deter them in pursuing an important goal. They were dissatisfied with the status quo, preferred variety and change, and delighted in what was new and different. Parloff and Datta (1965)\textsuperscript{53} found creative adolescents ambitious, driving, independent, autonomous, self-reliant, efficient, perceptive, imaginative and rebellious about rules and constraints.

Researches have also indicated that creative adolescents are significantly masculine (Little John 1967)\textsuperscript{54} adventurous, extroverted and self-confident (Kurtzman 1967)\textsuperscript{55}, less religious, orthodox (Barron 1970)\textsuperscript{56}, and extroverted (Borad and others 1971)\textsuperscript{57}. They are interested in artistic activities (Sharma 1974)\textsuperscript{58}.

However, there is much to be explored in locating the personality traits of creative adolescents as these traits may not be so stable during the adolescence.

COMPONENTS OF CREATIVITY

According to Guilford, creativity consists of the components of fluency, flexibility, originality, elaboration
sensitivity to problems, and redefinition. The creative process can be achieved through the ten significant stages as identified by Reilly and Lewis (1983)\textsuperscript{59}.


Wallas (1926)\textsuperscript{60} described the process of creativity as consisting of four stages:

(i) Preparation, (ii) Incubation, (iii) Illumination, (iv) Verification.

The five steps in creative problem solving identified by Parnes-Purdue (1967) are:

(i) Problem finding, (ii) Fact finding, (iii) Idea finding, (iv) Acceptance finding and (v) Implementation or execution.
NURTURING AND STIMULATING CREATIVITY

Creativity, as a natural endowment, needs stimulation and nourishment. For promoting creativity a number of strategies should be adopted as:

(i) Give freedom for expression.

(ii) There should be value spontaneity, openness and flexibility.

(iii) Guide students in thinking through process.

(iv) Acknowledge and appreciate originality, being different, unusual and unique.

(v) Alternate responses, critical thinking, constructive suggestions should be encouraged.

(vi) Eliminate censorship, ridicule and criticism.

(vii) Encourage exploration, experimentation and elaborations.
(viii) Avoid mental blocks and hesitations, both internal and external.

(ix) Creative responses should be recognized and rewarded.

BRAINSTORMING

Brainstorming has been one of the most widely and successfully used techniques of teaching for the development of creative potential. Osborn (1953) developed this idea getting technique initially for use in his advertising business which later on proved useful in any kind of situation where ideas were needed to solve problems. Later, it has been used as a major technique of creativity development. Brainstorming dramatizes new ideas, makes people focus their attention upon them and realize the importance of ideas. It shows participants of the Brainstorming session that they also have the ability to think new ideas. This is very beneficial to individual ego and self-confidence. For a successful brainstorming session, certain conditions conducive to free thinking have to be created. Therefore, in group brainstorming much depends upon the skills of the leader in creating those conditions and conducting the session successfully. The brainstorming session will become a fiasco if the leader displays his omniscience resulting in fear in the mind of more timid members to open their mouths. The
leader who allows criticism into the proceedings, likewise fails to get the best out of the participants.

IDENTIFICATION OF CREATIVE INDIVIDUAL

An individual is creative to the extent to which he can demonstrate creative potential in his thinking, actions and feelings. Creative individuals can be identified in various areas like academic, artistic, mechanical and scientific by the use of available creative test and multiple non-testing techniques like observation, interview, rating scale, personality, inventory, situational tests, interest inventories, attitude scales, aptitude tests, value schedules and projective techniques etc. The personality characteristics of the creatives may also provide reliable indications for the identification of creative individual.

Creativity Tests

There are a number of standardised tests used in India and abroad to measure creativity. Some of the foreign tests of creativity are:

(i) Minnesota tests of creative thinking.
(ii) Guilford's divergent thinking instruments.
(iii) Wallach and Kogan tests of creativity.
(iv) Torrance tests of creative thinking.
The tests standardized in India are:

(i) Passi's Test of Creativity (1972).

(ii) Baquer Mehdi's Verbal and Non-Verbal Test of Creativity (1973).

(iii) Khiangte's Creativity Test (1987).

PERSONALITY TRAITS

According to Cattell, the basic structural element of personality is trait which is inferred from behaviour. A trait describes the consistent behaviour of an individual. A trait represents a broad reaction tendency. It expresses some pattern and regularity in behaviour overtime and across situations. There are number of traits, some traits are found common to all, and others are unique to an individual. Some traits are constitutionally determined, while others are the product of environment.

Personality is described by the large number of traits. Allport and Odbert collected 18000 terms used to describe human characteristics. Cattell reduced these terms to 35 basic traits. Through a rigorous factor analysis, Cattell discovered 12 independent factors and 4 secondary factors. Cattell regards
these 16 personality factors as source traits, since they are unitary and independent. These traits are expressed in the form of a continuous scale having a positive and negative end.

PERSONALITY TRAITS OF A CREATIVE INDIVIDUAL

Different researchers have presented different lists of personality traits attributed to the creative person. These studies have brought out the following personality traits of a potentially creative individual.

(1) Originality of ideas and expression.

(2) Adaptability and a sense of adventure.

(3) Good memory and general knowledge.

(4) A high degree of awareness, enthusiasm and concentration.

(5) An investigative and curious nature.

(6) Lack of tolerance for freedom, ambiguity and discomfort.

(7) Foresight.

(8) The ability to take independent decisions.
(9) An ambitious nature and interest in vague, even silly ideas.

(10) An open mind with preference for complexity, asymmetry and incompleteness.

(11) A high degree of sensitivity towards problems.

(12) Fluency of expression.

(13) Flexibility in thought, perception and action.

(14) Ability to transfer learning or training from one situation to another.

(15) A creative imagination.

(16) Diversity and divergence of thought even in convergent and stereotype situations.

(17) Ability to elaborate, to work out the details of an idea or a plan.

(18) Absence of the fear of and even attraction to the unknown, the mysterious and the unexplained.
(19) Enthusiasm for novelty of design and even of solution of problems.

(20) Pride in creation

(21) Peace with his own self so that he has more time for creative pursuits.

(22) High aesthetic values and a good aesthetic judgment.

(23) Self respect, self discipline and a keen sense of justice.

(24) Ebullient and easy nature with a relaxed attitude.

(25) Awareness of obligations and responsibilities.

(26) Ability to accept tentativeness and to tolerate and integrate the opposites.

(27) Patterns of thought different from those of the less creative, particularly during creative activity.

(28) Respect for the opinions of others and acceptance of disagreement and opinions different from one's own.
(29) Spontaneity and ease of expression.

(30) The capacity to fantasize and day-dream.

PROBLEM SOLVING ABILITY

Problem solving behaviour is the most complex behavior that a human being can acquire. To solve problems, any and all of his behavioral resources may be utilized. Furthermore, learning to cope with problems has pervasive effects on personality development. Engaging in and successfully solving problems teaches the person something about himself. He acquires a concept of himself as a successful problem solver, a concept that acts as a stimulus to prompt problem solving behaviour.

Intelligence has been defined as the ability to solve problem. Thus, other things being equal an older and more intelligent person can solve a problem with less fumbling and fewer errors than a younger and less intelligent child.

Problem situations require the solver to hypothesize and test solutions until he finds one. The problem solver invents solutions, in some degree he is original. The more difficult and complex the problem for the solver, the less that is known or knowable about solving it, the more inventive, the more original he must be.
Creative behaviour is behaviour that results in products or achievements judged to be creative by relevant judges. Original behaviour is a necessary condition for creative behaviour. But not all original behaviour results in creativity - either because an original idea is not translated into an achievement, or because such a translation is not judged to be creative.

Problem solving involves convergent and divergent thinking. In divergent thinking, we think in different directions and search for more than one answer to solutions. But in convergent thinking, the information lead to one answer or to a recognized or conventional answer. Convergent thinking is associated with reasoning and divergent thinking is associated with creativity. Thus, Skinner said "Problem solving is the framework or pattern within which creative thinking and reasoning take place."

RATIONALE FOR THE PRESENT STUDY

The conceptual analysis cites a number of theoretical dispositions with respect to personality dimensions among the intellectually gifted and creative individuals. While there are a number of approaches to examine the personality characteristics of the intellectually gifted and creatives separately, there is not much research to compare the personality characteristics of
the gifted and creative. Getzel and Jackson (1962) were the first to explore the characteristics among the two groups, but the research has failed to analyse the personality and the problem solving ability of the groups specifically. Also, there is no theoretical proof and empirical studies are silent in identifying the personality and problem solving ability especially among the college students. This dearth in research has affected negatively the Special Education Programme, formulation of policies and identification of talented in India. It is envisaged that the present research will fulfill the gap in this aspect and the research perspectives shall help to understand the characteristics and abilities of the gifted and creative students. It will also pave way for evolving special education strategies and help in formulating special education policies.
NOTES


49. Sharma, K.N.: Three Angels of Looking at a Creative Person, Creativity Newsletter, 1975-76, 4-6, 2-1, 6-13.


