CHAPTER II

THEORETICAL PERSPECTIVES

2.0 INTRODUCTION

2.1 CREATIVITY

2.1.1 IMPORTANCE OF CREATIVITY

2.1.2 THE NATURE OF CREATIVITY

2.1.3 THE CREATIVE INDIVIDUAL

2.2 NORMS

2.3 RELIABILITY

2.4 METHODS OF ESTIMATING RELIABILITY

2.4.1 EQUIVALENT FORM METHOD

2.4.2 TEST-RE-TEST METHOD

2.4.3 SPLIT-HALF METHOD

2.5 VALIDITY

2.6 METHODS OF DETERMINING VALIDITY

2.6.1 CONSTRUCT OR CONCEPT VALIDITY

2.6.2 CONGRUENT VALIDITY

2.6.3 CONCURRENT VALIDITY

2.6.4 FACTORIAL VALIDITY

2.7 RESUME
CHAPTER II
THEORETICAL PERSPECTIVES

2.0 INTRODUCTION

During the second world war, people heard and read numerous stories of brave and dare devil soldiers who astonished the whole world by putting up a masterly display of courage, creativity and imagination. The discovered best solutions even for most complicated problems. After the end of war, the psychologists were attracted towards the investigation of that wonderful ability which enables the human beings to make new inventions and help them in finding solutions to challenging problems and makes the life worth living. This wonderful and amazing, ability has been labelled as 'CREATIVITY'.

The creativity is not a newly invented phenomena today, but it is scientific analysis of creative behaviour of the human being. It is also a measurement and identification of creative behaviour of the human beings. The ways and means to develop creativity is a recent advance in the field of psychology, education and research. Increasing importance of this newly explored concept and growing needs of implementing the same in the field of education necessitated the immediate consideration and planning of schemes for
developing of creativity of the students and orient the teachers for doing so. Besides creativity teachers succeed in devising some novel ways of bringing about modifications in behaviour pattern of students.

All the individuals possess creative behaviour in some manner. Creative persons at present are found in all the countries and in all ages. Generally people have been of the view that only writers, poets, painters, musicians and scientists are creativity persons. But now-a-days, a number of psychologists have started feeling that creativity can exhibit its pleasant influence in any sphere of life. A doctor, a teacher, a clerk, a peon, a labourer, a butler and a mother all can be creative persons in their respective fields of work, e.g. A labour inventing a method of doing more work by putting in less labour, is also a creativity labourer. After experimenting with various methods of teaching, if a teacher effects such changes in them as to enable the students to learn in an effective way, then he too, is a creativity teacher. Besides a creativity teacher succeeds in devising some novel way of bringing about modification in the behaviour patterns of students.

Thus everyone consider his work to be more important
and creative than the work of others. But in fact it is the way of doing the work which is creative and any man can do his work in a creative way if nature has bestowed upon them to the gift of creativity in abundance. It can be said that only creative persons can do their work in a creative way. Thus the students who possess the ability of creativity can possess the creative behaviour. The creative behaviour of a student is the result of his ability of creativity.

2.1 CREATIVITY

Educationists and psychologists do not have consensus about the definition and meaning of creativity. The best one can hope to do is to bring together some of the ideas engendered by the word ‘creativity’ and allow them to act as a frame of reference throughout the discussion.

There we find many definitions of creativity. Barran States: "Human creativity may prove to be the key to success or failure in mankind’s quest for knowledge." Concerning the problem of identification, he says that one must look for a searching type of mind, a combining mind, a synthetic mind. Such concepts as curiosity, imagination, discovery, innovation, invention and the like are prominent in discussions of the meaning of creativity.
Morgon (1953) published twenty-five definitions of creativity. The consensus of these definitions points out that creativity involves the development of something unique, although uniqueness has not been well defined by the different investigators. The definitions emphasize either one or a combination of the four aspects person, process, press and product. Rodes (1961) also envisaged creativity through the approaches of 'person', 'press' and 'product'. He writes that creativity may be considered from the standpoint of the person (i) who creates, that is in terms of physiology and temperament, including persons attitudes, habits and values. (ii) mental processes, such as motivation, perception, learning, thinking and communication. (iii) environmental and cultural influence and finally (iv) products such as theories, inventions, painting, carvings and poems.

An empirical definition of manifest creativity is suggested by Stein "creativity is that process which results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time." Potential creativity is suggested when an individual does not satisfy the requirements of the stated definition that nevertheless performs on psychological testing like individuals who do manifest creativity. He further stated that creativity is a process of
hypothetical formulation., hypothetical testing and the communication of results which are the resultant of social transaction. The early childhood, family environment and transaction facilities inhibit creativity.

Guillford in his model structure of intellect observed that creativity involved the interplay of all factors of divergent thinking on the one hand and the factors of seeing problems and evaluation on the other. Good and Markel (1959) described "creativity as a quality thought to be composed of broad continuum upon which all members of the population may be placed in different degrees." He tentatively described the factors of creativity as associational and ideational fluency, originality, adaptive and evaluation.

Piers remarked that creativity could be taken as the capacity of the individual to avoid usual, routine and conventional way of thinking and of doing things and to produce a quantity of ideas and original, novel and useful producers. They further observed that creative thinking is purposeful and goal-directed. The formation of new pattern or behaviour of information derived from past experience and transplanting of old relationships to new situations or generation of new relationships.
De Hann and Havighurst reported the efforts of Wilson who tried to bring to focus the diversity in the meaning of creative process as below:

(i) The outflow of individual or group through which a product is structured.

(ii) An action of the mind that produces a new idea or insight.

(iii) The mental process of manipulating the environment which results in the production of new ideas, patterns or relationship.

(iv) The capacity to produce through thought or imagination; the capacity for original work.

(v) The emergence in action of a novel national product growing out of the uniqueness of the individual on the one hand and the materials, events, people or circumstances of his life on the others.

(vi) The mental process that involves the rearrangement of past experiences with possible some distortion into new patterns to behaviour satisfy some expressed or implied need.
The process which results in a novel work that is accepted as tenable behaviour or useful or satisfying by a group at some point in time.

The creative process is any process behaviour which something new is produced - An idea or an behaviour including a new form or arrangement of old elements. The new creation must contribute to the solution of some problem.

Smith has opined that creativity is a process more than product. A person with creative behaviour is one who is habitually engaged in the creative process.

Maslow (1963) insisted on the importance of the flash of inside - the transcendent sensation itself - without reference to whether it will ever result in anything tangible. The salient issue is not the 'inspired produce' behaviour the 'inspired moment.'

Lehois (1963) submitted "creativity may be viewed as a complex human attribute that is manifested as a cognitive empirical process from which an original product emerges. (The process unfolds within all individuals behaviour most intensity within those who process a creative personality.)" Lohais has
taken creativity as unitary trait.

Ghiselin reported the existence of behaviour factor of creativity and speculated then, an analogous non-verbal factors of creativity might also exist. The two behaviour definitions of creative thinking of the Utan conference statement, according to Taylor are that of Ghiselin and Locklen. Ghiselin proposed that measure of creative product is the extent to which it restructures our universe of understanding. Lacking (1957) uses the extent of area of science that the contribution underlies that more creative the contribution, the better wider the effects. Getzel has attempted to deal with creativity along some what different line, giving primary to the nature of the problem rather than to solution. A distinction is made between presented and discovered problem situations. The former involving a problem that is already formulated the latter a problem still needs formulation. The significant element in creative performance is the envisement of the creative problem, for it is the fruitful question to which the novel situation is the response.

Torrance defined creativity as a process of becoming sensitive to problem, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on, identifying the difficulty, searching for solutions, making guesses or formulating hypothesis
about the deficiencies testing and retesting these hypothesis and possibly modifying and retesting them and finally communicating the results. This definition described a natural human process. Strong human needs are involved at each stage.

Wallach and Kogan have placed great emphasis on the creative person's store. They state. "If we assess person's capacity to generate cognitive elements, one factor influencing his performance as extensiveness of his repertoire."

Mednick and Medinicstate, "creative thinking consists of forming new combinations of associative elements, which either meet specified requirements or are in some way useful. The more useful. The more usefully remote the elements of the new combination, the more creative is the process of solution."

De BONO'S lateral thinking is closely related to insight, creativity and humor. It is an indefinite way of using the mind as logical thinking, behaviour in a very different way. He says that lateral thinking is an insight tool. It is concerned with the generation of new ideas, vertical thinking is concerned with proving or developing concept pattern. Lateral thinking is concerned with restructuring such patterns (insight) and provoking new ideas (creativity).
Anderson has proposed that creative ability is most frequently the opposite of good judgement. Creative ability includes the tendency to experiment with novel ideas that might be unsound. It includes a good deal of the Gombler’s spirit where the individual ‘sticks for neck out’ and tries something new perhaps even ‘wild or crazy’. Therefore by its very nature, creative behaviour is on the opposite end of the scale from good judgement.

Having pursued the various definition of creativity, Mackinnon explains that many are the meaning of creativity it denotes the ability to bring something new into existence while for others is not an behaviour the psychological processes behaviour which novel and valuable products are fashioned. For still other creativity is not the process but the product. Definitions of creativity range all the way from nation that creativity is simple problem solving the conceiving it as the full realization and expression of all of an individual’s unique potential abilities.

Influenced behaviour the definitions of Good and Market, Guilford and Torrance, an operational definition of creativity was formulated by Passi. According to him creativity is multidimensional (verbal and non verbal) attribute
differentially distributed among people and includes chiefly the factors of problems solving, fluency, flexibility, originality, inquisitiveness and persistency. It may be pointed out at this stage that creative thinking is accepted to be marked by the action of mind purposefully directed to manipulate the environment with a view to create new ideas and establish novel pattern and relationship.

After going through all these definitions of creativity, it can be understood that the persons with creative ability possess the creative behaviour. For creative behaviour one should have the ability of creativity.

2.1.1. Importance of creativity

The discovery and development of creative ability has become essential in our modern world. The national interest now demands increased emphasis on creativity and superior thinking ability in all branches of science, literature and art. It also demands the creative behaviour of the future citizens i.e. students of the nation.

Creativity "an ultimate human asset needs to be identified, stimulated and nourished during childhood, if we are serious about developing fully functioning, mentally healthy,
well-educated and vocationally successful individuals, Creativity deserves special attention keeping in mind its great contribution in various fields and faculties. So the teachers of the nation and parents must not neglect or underestimate creativity. The phenomenon of creativity is very complex and multi-dimensional. Imagination, thinking, insight, intuition and spirit are the most significant criterion in psychology and education. The word creativity sounds absolutely abstract. Its contribution in improving man's health, happiness and social situation is perhaps beyond limit.

Creativity is a unique gift of nature and it has been as significant as any human quality in changing and reshaping history and the world. Creativity is an obvious aspect of intellectual functioning. It is not one ability at all but a cluster of abilities and potentialities, that influences human activities in almost all shapes and spheres of life. Thus, creativity contributes significantly either directly or indirectly to the acquisitions of Educational skills and informations.

Creativity in various fields and faculties like science, technology, literature, sculpture, painting, music, mathematical discoveries etc. Later on leads to well settled and stable set up of society and civilization.
Creativity is fruitful becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements and so on. Searching for solution, making guesses or formulating hypothesis and possibly modifying and resulting them and finally communication of the result. The root of creativity is curiosity and concrete result are part of productivity apparently visible in various fields and faculties that later promotes personality.

Creativity is the spirit of man that is responsible for all achievements. By the help of creativity, child think unthinkable, does undoable and prefers imagination and practically both.

The creativity is the expression of ideas, receptivity to ideas, desire to grow up a man and actualizing one's potential. Creativity brings notable changes in things thoughts, social structures through action thinking, which results in a situation not previously known by the man. Thus creativity is related to madness. So more creative people are mad and mature as well.

Creativity involves independence of mind, nonconformity to group pressures, some unusual problems of adjustment, Repression of creative needs may lead to actual personality break down. Their expression leads loneliness
conflicts and other problems of adjustment. Many time the highly creative child must either repress his creativity or learn to cope with the tensions. So parents, teachers, administrators and counsellors need to understand about creativity and its developing and maintaining.

2.1.2 The Nature of Creativity

The discussion on the nature of creativity that follow on three aspects: Creative abilities, the learning or acquisition of these abilities and their development and use in problem solving for practical reasons the discussion will consider a low degree of creativity. To some extent every one has the capacity for creative behaviour but few individuals would make original scientific and artistic contributions which might achieve historical distinction. Therefore, what is referred to in the following discussion about the nature of creativity is a wide spread general ability of creativity shared by almost all to a smaller or greater extent.

2.1.3 The Creative Individual

Whom shall we call a creative individual? Do they possess some such characteristics which help us in their recognition? These are some questions which are important to a teacher. If he knows the answer to these, he may pay special
attention to the education of creative children. Creative children possess the creative behaviour. In this way not only the teacher will help in the development of the creative individual and his creative behaviour but may also serve the society and the nation because it is through the creative individual and his creative behaviour that the nation is enriched technologically and scientifically.

Accordingly to Taylor (1961) a creative individual may have the following traits:

(i) **Intellect**

For creative thinkers some cognitive abilities are essential. In this the abilities of memory evaluation are included. Sensitivity originality and the ability to reconstruct are essential. A creative individual should also have the ability to sense the problem, must be recognise ambiguity if it is present in some situation.

(2) **Motivational Interest**

The creative individual has curiosity. He has need for high achievement which keeps him continuously busy in that direction. He remains in search of challenges. He gives more importance to complex and tolerates indefiniteness. He
remains fully engaged in creative work.

(3) Creative Personality

The important individual qualities in a creative individual are independent thinking, tendency to take risks, industriousness and courage. He is more an extrovert as compared to non-creative individuals.

Carl Rogers (1959) also recognises three internal conditions of a creative individual: (i) Openness in experience which gives no place to inflexibility, (ii) Ability to evaluate in accordance with one's needs; and (iii) Ability to practise and to accept the instable.

There is no deadline to . It keeps growing year after year in pace with the effort one puts into it - defies the calender. It stops only when we allow our minds to grow rusty. A creative individual's abilities can be seen in the interaction of intellect, personality, motivation and the biography of the individual.

2.2 NORMS

An individual's performance in any psychological and educational test is recorded in terms of raw scores. Row scores are expressed in terms of different units, such as the.
number of trials taken within a specified period to reach a criterion; the number of correct responses given by the examinees; the number of wrong responses given; the total time taken in assembling the objects, and like that. All, these raw scores convey no meaning in themselves.

The raw scores as it is, can not be interpreted, though it is fundamental piece of information, the raw score does not give any idea about an individual; The individual score must be looked in relation to his group. The test users are fundamentally interested in knowing how far an individual or group of individuals stands against the criteria. The fundamental criterion is generally the average performance of the entire group; the individual who takes the test is interested in knowing his relative position in one’s group. Thus, the norm is relative measurement. This is an important and most essential point in the standardization of the scale. In the absence of the norms no individual subject would get an idea about one’s own performance on the scale. The term 'Norms' may be defined as the average performance of the average group of individual.

Anastasi has defined norms as, "as its name implies a norm is normal or average performance."

Freeman defined norm as "a norm is the average or
The norms are established by giving the scale to a large and representative sample.

There are various types of norms, such as (1) Age norms, (2) Grade norms, (3) Sex norms, (4) Area norms, (5) percentile norms, (6) Quotient norms and (7) Standard scores. Age and Quotient norms are generally established for the scale to be used in elementary schools.

Green has rightly suggested, "The norms are also conditioned somewhat by the nature of the test itself. Tests are designed for use in elementary schools, grades are usually accomplished by age norms and grade norms and sometimes percentile norms based on grade placements. Tests intended for use in the secondary school are more frequently provided with percentile grade norms only. Age norms do not seem to be particularly useful at high school and college level, since so many factors other, than age operate to effect achievement."

2.3 RELIABILITY

The main purpose of measurement is to arrive at some standard and precise judgement about an individual. The
judgement would be of some value, if it is based on dependable scores earned on dependable scale. The dependable scale means a reliable scale. The term reliability denotes trustworthiness of consistency.

Reliability is one of the important characteristics of a scale. In its simplest sense, reliability refers to the precision or accuracy of the measurement or score. A well made scientific instrument should yield accurate result both of present as well as overtime. In other words, such an instrument should give consistent results. Reliability refers to the consistency of scores or measurement.

The reliability may be defined as the consistency of scores obtained from one set of measures to another. According to Anastasi "Reliability refers to, the consistency of scores obtained by the same individuals when reexamined with test on different occasion, or with different occasion, or with different sets of equivalent items, or under other variable examining conditions."

Ebel has given an operational definition of scale reliability as follows: "The reliability coefficient for a set of scores from a group of examinees is the coefficients of correlation between that set of scores and another set of
scores on an equivalent test obtained independently from the members of the same group."

This definition implies that reliability is not a property of the scale by itself but rather of a scale when applied to a particular group of respondents. The more appropriate the scale is not the level of abilities in the group, the higher is reliability of the score it yields.

This operational definition specifies that high correlation coefficients is that provides a relative rather than absolute measure of agreement between the pairs of scores obtained from the same persons. If the differences between scores for the same persons are relatively small to the difference between scores for different persons the scale tends to show a high reliability. But if the differences between scores for the same person are relatively large to the differences between persons, the scores will show low reliability.

The operational definition calls for two independent measures obtained from equivalent test of the same trait for each member of the group. The above discussion reflects only one aspect of reliability namely adequacy of statement sampling. Another aspect of reliability is concerned with temporal stability i.e. the extent which the original scores could be
reproduced on different occasions.

Rammers and Gage have defined reliability as, "The consistency with which a test yields the same results in measuring whatever it does measure."

The definitions indicates that there should be stability of the scores for the same individual, if the scale is given repeatedly. In other words the reliable test gives approximately the same result on two different occasions. This does not mean that there would not be any difference on two successive scores of the same individual obtained at two different occasions. There would be slight fluctuations. These fluctuations would not affect the reliability of a scale.

This aspect of reliability indicates that the scale should be stable with respect to those factors with operate during the interval time the test and retest to the extent that the two sets of scores are correlated; to that extent the test is reliable. If this correlation is low or insignificant it means that the items are affected by the factors operating in the time interval. However, full proof reliability is still a question since the test is to deal with human being having variety of moods at different time interval. This does not mean that one can be flexile with the 'Reliability'
as aspect of the test.

Robert Lado points out; If the scores of the student are stable, The test is reliable, if the scores tend to fluctuate for no apparent reason the test is unreliable".

In short a scale must show sufficient evidences of it reliability. A scale without the statements of its reliability would be of a little value.

Anastasi has rightly said: "Despite optimum testing condition, however no test is perfectly reliable instrument. Hence every test should be accomplished by a statement of its reliability.

2.4 METHODS OF ESTIMATING RELIABILITY

The reliability is statistical concept. The evaluation of the reliability of a scale requires determination of the consistency of repeated measurement of the same individual or group of individuals. In practice all procedure of estimating reliability of a scale in psychology and education are based upon getting smaller number of measurements, typically only two, for each individual in a representative group. The stability of the result is achieved by increasing the number of individuals rather than the number of measurement of each. These measurements
provide sets of scores, usually two for each individual for analysis. The usual analysis consists of computation of the coefficients or correlation between the two sets of scores, giving an estimate or reliability. This co-efficient of correlation is generally expressed as the reliability coefficients of the scale.

A number of different methods are used to derive the reliability coefficients. There are three most common methods of estimating the reliability coefficients of scale scores. These methods are (i) Equivalent forms method, (ii) Test Retest method and (iii) Split-Half Method.

2.4.1 Equivalent Forms Method

This procedure is very simple. From the very beginning the investigator has to prepare two equal forms of the scale. These two forms must be very close in similarity. They should be close in matter of content, trait to be measured and processes required for responding the statements and in number of statements. The statements must have equal discriminative power, internal, consistency and under dimensional ability. The examinee takes one form of scale and then the other form soon after that. In order to control some error variance or practice effect the turns of the form should be
rotated. The agreement between the two is determined by means of a correlation coefficients. This method overcomes the limitations of effect to time interval between two successive administrations of the evaluation device. This method is rarely used. Since it is very difficult to have two parallel forms of the same scale. Construction of two equivalent forms needs a lot of time. Therefore this method of estimating reliability is rarely used.

This method is known as parallel forms method or alternate form method or comparable forms method.

2.4.2 Test-Retest Method

This method of establishing the reliability of the scale is indeed very simple and easy. In this method the scale is to be administered to the group of individuals representative of the sample on two successive occasions. The interval of time between the administration of the scale on two successive occasions must be short not allow any great changes in the subjects. Yet long enough, so that they could not response to the scale by memory on the second administration. A pair of scores is obtained for each respondent. The set of scores are then correlated to find out the reliability coefficients of the scale.
Though simple, this method has certain limitations too. This method is time consuming method of estimating the reliability coefficients. This method assume that the examinee’s physical and psychological set up remain unchanged in both testing situations. But in examinee’s health, emotional condition, motivational condition and his mental set up do not remain perfectly uniform. Not only this the examiner’s physical and mental make up also change. Besides, some uncontrolled environmental changes may take place during the second administration of the scale. All these factors are likely to make the total score of the examinees different from the first administration. The reliability coefficients obtained by this method is high because memory plays a large part in answering the scale at second time. Besides the memory effects, practice and confidence gained by familiarity with the scale also affect the scores on second administration.

When the examinee is once acquainted with the scale and the made of answer, he is likely to develop a skill which may help him in the second administration. He is also likely memories many answers given in the first administration if the time between two administrations is too short. All the acquired skill, knowledge and memory of first time are likely to help examinees in answering them in more or less in similar
way the second time thus helping them in retaining their same relative position. If the time between two administrations is too long, same significant changes taking place during the time interval would produce low correlation. Thus, the time interval between two administrations should be neither too long nor too short. Despite all these limitations, this method is most appropriate method of estimating reliability, so this method is mostly used and it is become more popular.

2.4.3 Split-Half Method

Internal consistency reliability indicates the homogeneity of the scale. The most common method of estimating internal consistency reliability is the split-half method. The scale is divided into two equal or nearly equal halves in this method. The common way of splitting the scale is the odd even number method. In this method all odd numbered items (like 1, 3, 5, 7, 9 etc.) constitute one part of the scale. Thus the entire scale would be split-up into two reasonable equivalent halves. Each examinee, thus, receives two scores; one score from the all odd numbered items and the other score from the all even numbered items. In this way from single administration of the single from of the scale two sets of scores are obtained. Then the reliability coefficients is computed.
The advantage of the split-half method is that all data necessary for the computation of the reliability coefficients are obtained in the single administration of the same scale is automatically eliminated. Therefore, a quick estimate of the reliability is made.

A scale can be split into halves through different methods and it has been found that each method yields a different coefficients of reliability. Undoubtedly, this is a weakness of the split-half method of estimating the reliability coefficients of a scale. Despite of this method is also mostly used.

2.5 VALIDITY

Validity is another important characteristics of the scale. The term validity means truth or fidelity. Thus validity refers to the degree to which a scale measures what it claims to measure. Every scale is expected to prove its worth. If the scale does not fulfil its worth, it is not worthy of anything. The term validity and purpose are very closely associated with each other. A scale with fulfills the purpose for which it is designed is called valid scale. This led to say that creative behaviour scale should measure the creative behaviour of the students and nothing else.
Garrett has rightly put it as: 'The validity of the test or of any measuring instrument, depends upon the fidelity with which it measures what it purports to measure.

Freeman defined validity index as: "An index of validity shows that degree to which a test measures, what it purports to measure, when compared with an accepted criteria."

Defining validity Anastasi has said, "The validity of a test concerns what the test measures and how well it does so."

Lindquist has defined validity of a test "As the accuracy with which it measures that which is intended to measure or as the degree of to which it approaches infallibility in measuring what it purports to measure."

The above definitions point to the fact that for determining the validity of a scale, the scale must be compared with some ideal independent measures or criteria. The correlation coefficients computed between the scale and the ideal measures or criteria is known as the validity coefficients.

The scale for measuring mental abilities, aptitude, attitude etc., must justify their purpose. In the process of scale construction and standardization, proof justification of purpose is known as the scale validation. Consequently validation
of a scale score is the most important and significant step in the process of standardization of any scale for the use look carefully into the value of validity. Therefore, the construction of the scale should make clear the concept of the validity.

2.6 METHODS OF DETERMINING VALIDITY

Procedure for the determining validity of the scale are primarily concerned with the relationship between performance on the scale and other independently observable facts about the behaviour characteristics under construction. There are many techniques that are employed for investigating these relationships.

Anastasi has presented as follows: "The APA Technical recommendation has classified these procedures under four categories, designated as content, predictive, concurrent and construct validity. Out of these four categories of these four categories of validity two namely content and construct or concept validity are described under the heading of rational validity by many authors. Similarly concurrent and predictive validity are described under the heading of empirical or statistical validity.

2.6.1 Construct or Concept Validity

In case of determining the construct validity the
first task is to define the measure. Thorndike and Hagen have rightly explained what the phase concept or construct really mean. "Again we are thrown back on rational analysis but time we are trying to analysis-concept and see what is implied by it, rather than to make a catalogue of content."

Construct validation is a more complex and difficult process than content validation and criterion validation. Hence, the investigator decided to compute construct validity only when he is fully satisfied that neither any valid and reliable criterion is available to him nor any universe of content entirely satisfactory and adequate to define the quality of the scale. In other words, construct validity is computed only when the scope for investigating criterion validity or content validity is bleak.

Construct validation is also a difficult process because it contains several problems like systematic examination concerning the definition of the construct, unsuitability and inappropriateness of the measures of the construct, lack of high correlations among measures etc. Thus construct validity is rarely computed.

2.6.2 Congruent Validity

This type of validity is essentially estimated by means of statistical technique. For the set of scores on the
present scale is correlated with the set of criteria of a similar measure. It means, it is correlated with some available well known powerful scale of the similar nature. The correlation of the new scale with the existing scale would show to what extent the two scales measure the same characteristics. If the correlation coefficient is very high between these two sets, it inferred that the new scale is valid, since it measures what the criterion scale is supposed to measure. The type of evidence just proposed is somewhat circular, for this, the condition is that the criterion test must be fully valid, otherwise the correlation between two scales would not be much dependable and this type of validity would be misleading.

2.6.3 Concurrent Validity

The evidence of the validity be obtained from the relationship with other currently obtainable information about an individual. Anastasi has defined the concurrent validity as: "The relation between test scores and indices of criterion status obtained at approximately the same time is known as concurrent validity".

For determining the concurrent validity the scale is correlated with a criterion which is available at the present time. The resulting coefficient of correlation will be an indicator of concurrent validity.
2.6.4 Factorial Validity

The factorial validity of a scale is the correlation between the scale and the factor, common to a group of scales or other measures of behaviour. Such validity is simply the factor loading of a particular factor in the scale in question. Such factor loading is also equivalent to the correlation of the scale with factor validity of a given scale is defined by its factor loading and are given by correlation of the scale with each factor.

According to Ebehaviourle, "Factorial validity of a test is the correlation between that test and the factor common to a group of tests or other measures of behaviour, such as validity based on factor analysis."

2.7 RESUME

The understanding of c- and creative behaviour in relation to certain psycho-socio correlates is necessary for the teachers of the high schools. So that the teachers of the high schools can provide the programmes that develop the creative behaviour of the students.
REFERENCES


