# UNIT-14 MEASUREMENT OF CREATIVITY

## UNIT STRUCTURE


14.1 Learning Objectives

14.2 Introduction

14.3 Meaning of creativity

14.4 Criteria of Creative Personality

14.5 Measurement of Creative Thinking

14.6 Measurement of Creative Thinking for Different Levels of Students.

14.7 Let Us Sum Up

14.8 Suggested Reading

14.9 Answers to check your progress

14.10 Model Questions


## 14.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- understand the meaning of creativity
- know the different criteria of creative personality
- comprehend the measurement process of creative thinking
- understand the process of measuring creative thinking for different level of students

## 14.2 INTRODUCTION

In this unit, you will be introduced to different psychological attributes of human beings and how they are measured. Measurement of such attributes of a person reveals his overall personality. In our surroundings or in a classroom environment, we find that some learners or persons are quite different from others in terms of their thinking and ideals. They do not think or perceive the world in a generalized view. Their perception towards the world is somewhat different from the general. The psychological attributes that identifies people as somewhat different in terms of his thinking and perception is creativity. As we know that creativity is the most valued

qualities of human beings which enormously effect all spheres of human live. Thus this unit will introduce you with creativity, different criteria of creative personality and measurement of creative thinking for different level students.

## 14.3 MEANING OF CREATIVITY

Creativity is an ability to be innovative, unusual, or be different from others. It is an ability to give novel responses, new answers and establish new relationships. One of the most important and accepted skills of our day is originality and usefulness. Creative thinking is problem solving from a different sense. Because there is a problem as the problem cannot be solved by conventional means. Its solution requires creating new ways, or divergent thinking and side thinking. However, it is hard to have a systematic creative thought and this is related to it being divergent. Some selected definitions of Creativity are as follows-

**PISA 2021** defined Creativity thinking as the competence to engage productively in the generation, evaluation and improvement of ideas that can result in original and effective solutions, advances in knowledge and impactful expressions of imagination.

**Amabile and Pratt (2016)** explains that, "Creativity is the production of novel and useful ideas and innovation as implementation of creative ideas".

**Plucker, Beghetto and Dow (2004):** "Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context", reflecting its multidimensional and social nature.

**Sternberg and Lubart (1999):** "Creativity is the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)"

**Feist (1998):** "Creative thought or behaviour must be both novel-original and useful-adaptive"

**H. Gardner (1993):** "The creative individual is a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes

accepted in a particular cultural setting".

**Welsch (1980):** Creativity is the process of generating unique products by transformation of existing products. These products, tangible and intangible, must be unique only to the creator, and must meet the criteria of purpose and value established by the creator.

**Torrance (1966):** "Creativity is a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, and disharmonies; identifying the difficulty; making guesses, searching for solutions; or formulating hypotheses about the deficiencies: testing hypotheses, and finally communicating the results".

**Mednick (1962):** "Creativity involves the process by which ideas already in one's mind are associated in unusual but original ways to form new ideas ".

**Guilford (1975):** "Creativity is a form of problem solving and distinguished between two types of cognitive operations: divergent production and convergent production".



**CHECK YOUR PROGRESS**

**Q 1:** State the meaning of Creativity.

.....

**Q 2:** State how the concept of "creativity" is viewed as by the researchers.

.....

## 14.4 CRITERIA OF CREATIVE PERSONALITY

J. P. Guilford, well-known in research and writing on creativity, visualizes creative thinking as a subclass of thinking in general. Creativity is seen as intelligent action that creates multiple solutions to problems by original and unique views (divergent) rather than limiting solutions by intelligence and logic (convergent).Guilford and other educators distinguish

between convergent and divergent thinking in the following way. Convergent thinking is using logic and knowledge to decrease the amount of possible outcomes whereas divergent thinking is foreseeing multiple solutions to a problem, having original and unique ideas. Convergent thinking (the kind most frequently encountered in our schools) is aimed toward a single correct answer. Divergent thinking is inquiring, searching around, often leading to unconventional and unexpected answers (the kind which would probably not bring you a high grade on the usual school examination). Guilford said both thinking method being together would be beneficial, but said that creativity thinking is more of a divergent thinking.

In his work Art of Thought, published in 1926, Wallas presented one of the first models of the creative process. In the Wallas stage model, creative insights and illuminations may be explained by a process consisting of 5 stages:

i) Preparation (preparatory work on a problem that focuses the individual's mind on the problem and explores the problem's dimensions)
ii) Incubation (where the problem is internalized into the unconscious mind and nothing appears externally to be happening)
iii) Intimation (the creative person gets a "feeling" that a solution is on its way)
iv) Illumination or Insight (where the creative idea bursts forth from its preconscious processing into conscious awareness)
v) Verification (where the idea is consciously verified, elaborated, and then applied)

Through the earlier discussion in the earlier semester, you have come to know about the taxonomy of educational objectives. As per the taxonomy of educational objectives under cognitive domain, evaluation falls on the top or higher level of the ladder. But, in 1990 Lorin Anderson, a former student of Bloom and a group of cognitive psychologists revised the earlier Bloom's taxonomy was revised and as per the new taxonomy of Bloom, there are six levels of cognitive learning. Each level is conceptually different. There six levels are-remembering, understanding,

applying, analyzing, evaluating and creating. Thus creativity falls on top of cognitive area. Creativity here has four dimensions. Those dimensions also show a levelled structure.

1. **Imitation:** Imitation is the first step of creativity. In this stage people and works done are imitated. A good example can be seen on artistic creativity. A person first imitates the art of famous artists. Then he/she tries to capture the fine techniques there. Creativity is new for this person, but not for the society or history.
2. **Relocation:** In this stage the person starts to use a known object, method or action somewhere else. In a sense this stage is the redemption step from function that is one of the obstacles of creativity. This type of creativity can be seen in children. Children take an object and use it something else, thus having creative behaviour.
3. **Making connections:** this stage is a more complex level of relocating. The person connects two objects that are not related, far from each other. He makes a never-before connection. This is the group which daily life considers as real creativity.
4. **Method development:** In this stage the person has created a new method with creativity and others start to imitate him with that method. This stage makes him a master.

Along with that creativity has eight properties, four cognitive, four affective. Those four cognitive properties are set by Guilford. They are-

1. **Rationalism:** Creating as much solutions as possible
2. **Flexibility:** Thinking in different ways.
3. **Originality:** Creating solutions that are different from others.
4. **Elaboration:** Detailing.

These cognitive properties are supported by affective properties.

5. **Curiosity:** Creative people are curious people.
6. **Complexity:** They are intellectually complex. They handle situations in a different and complex manner.
7. **Risk taking:** They look for unconventional solutions and take risks. They take risks by looking for the yet unknown.

8. **Imagination:** They have strong imaginations



**CHECK YOUR PROGRESS**

**Q 3:** Distinguish between convergent thinking and divergent thinking.

.....

**Q 4:** State the five stages of creative process development.

.....

**Q 5:** State two cognitive and affective properties of Creativity.

.....

## 14.5 MEASUREMENT OF CREATIVE THINKING

The growth of creativity research has been associated with looking for dependable instruments to measure it. Based on different definitions of creativity, researchers have developed different instruments for measuring it. Each instrument reflects the conception of its developer regarding the nature of creativity. These instruments are typically classified into four approaches representing the four main categories of creativity definitions: process, product, person and press.

1. **Process approach:** The process approach in creativity measurement focuses on the specific cognitive processes and structures that are conducive to creative production. Divergent thinking tests have been most widely used for measuring creative processes or creativity-relevant skills. Examples of these tests include

i) Wallach-Kogan Creativity Tests (WKCT; Wallach &Kogan, 1965)

ii) Torrance Tests of Creative Thinking (TTCT; Torrance, 1966, 2008)

iiii) Structure of the Intellect Divergent Production Tests (SOI, Guilford, 1967)

iv) Creativity Assessment Packet (CAP; Williams, 1980).

These tests, which are also known as measures of ideational fluency, include open or ill-structured problems that require individuals to generate as many responses as possible, which are then scored to capture fluency (number of responses), originality, flexibility (number of different categories) and elaboration.

2. **Person approach:** This approach for measuring creativity relies heavily on using self-report questionnaires that enquire about personality traits related to creativity. Instruments in this area were designed by investigating the characteristics or interests of individuals who produced creative achievements. This generates a set of distinctive personality traits for creative individuals, including attraction to complexity, high energy, behavioural flexibility, intuition, emotional variability, self-esteem, risk taking, perseverance, independence, introversion, social poise and tolerance to ambiguity. An individual who exhibits these characteristics is more likely to act creatively than an individual without these characteristics. Several questionnaires have been developed in this area, such as
   - How Do You Think? (HDYT; Davis &Subkoviak, 1975),
   - Creative Personality Scale (CPS; Gough, 1979)
   - How Creative Are You? (HCAY; Raudsepp, 1981).

   Other self-report questionnaires ask individuals about their past creative production instead of personality traits, based on the assumption that past accomplishments can provide a dependable indication of subsequent creative accomplishments. Such questionnaires include
   - Creative Behaviour Inventory (CBI; Hocevar, 1979c)
   - Creative Achievement Questionnaire (CAQ; Carson, Peterson, & Higgins, 2005)
   - Biographical Inventory of Creative Behaviours (BICB; Batey, 2007).
3. **Product approach:** The product-based assessment of creativity has been widely recommended for assessing creativity. It has been argued that a comprehensive assessment of an individual's creativity cannot be attained without a measure of its product. The focus within

this approach lies on rating individuals' creative products in different areas, such as writing, art, music, science or mathematics. The Consensual Assessment Technique (CAT), suggested by Amabile (1982), has been frequently used in creativity studies that employed a product-based assessment. The CAT is not built upon any creativity theories; instead, its main idea is that the best evaluators of the quality of creative products are recognized experts in the relevant domain. Accordingly, the validity of the CAT is not subject to the acceptance or rejection of creativity theories whenever additional evidence is gathered. As a result, it is easy for the CAT, unlike other creativity measures, to accommodate diverse perspectives on many of the controversial theoretical issues in creativity research.

4. **Press approach:** The press approach concentrates on the analysis of the work environment or climate where creativity is realized. The measurement of these environmental factors is based on the idea that there is an indirect relationship between these factors and creativity. Previous studies have revealed that environmental factors can significantly affect individuals' intrinsic motivation to engage in an activity, which in turn affects their creativity. Numerous factors have been found to influence the development of creativity in learning environments. In a systematic review of studies relating to creative learning environments, Davies et al. (2013) determined key characteristics of school environments that enhance creativity, including an appropriate physical environment, availability of various materials, using outdoor environments, an exciting pedagogical environment, employing games-based approaches, flexible use of time and supportive relationships between teachers and students. Commonly used instruments in this area include
   - Siegel Scale of Support of Innovation (SSSI; Siegel &Kaemmerer, 1978),

- College and University Classroom Environment Inventory (CUCEI; Fraser, Treagust, & Dennis, 1986)
- Work Environment Scale (WES; Moos, 1986)
- Work Environment Inventory (WEI; Amabile&Gryskiewicz, 1989)
- KEYS: Assessing the Climate for Creativity (KEYS; Amabile, Conti, Coon, Lazenby, & Herron, 1996)
- Team Climate Inventory (TCI; Anderson & West, 1998)
- Situational Outlook Questionnaire (SOQ; Isaksen, Lauer, &Ekvall, 1999).

Generally, these instruments share some dimensions such as members' perceptions of organizational vision, resources, leadership, freedom, interactions, support for creativity and in-novation and continuous development.



**CHECK YOUR PROGRESS**

**Q 6:** State the four approaches of measuring creativity.

.....

**Q 7:** Name any two tools that measure personality traits related to creativity.

.....

**Q 8:** Name any two characteristics of school environment that enhance creativity.

.....

## 14.6 MEASUREMENT OF CREATIVE THINKING FOR DIFFERENT LEVELS OF STUDENTS

There is no single ability or trait to creativity. Indeed, creativity involves a combination of cognitive (information processing), conative (personality traits, motivational aspects), and emotional factors (affective state, trait)

that are interacting dynamically with the environment (which stimulates or inhibits the expression of creative potential) resulting in the uniqueness of the creative process and product.

**Measurement of creativity are generally grouped into three broad categories:**

A. Measurement of Creativity as a Status
B. Measurement of Creativity as a Level
C. Measurement of Creativity as a Style

**A. Measurement of Creativity as a Status - "Is this Student Creative?"** This question the implicitly refers to creativity as an exceptional process that is rarely observed in the general population; a process which is thus either present or absent. Measures addressing precisely this question therefore focus on the creative outcomes that one may or may not demonstrate. Biographical inventories (e.g., Biographical Inventory for Students) and achievement questionnaires (e.g., Creative Achievement Questionnaire) are also good examples of this category. Typically, these self-report measures focus on past accomplishments in creative domains. The main assumption underlying the measurement of creative achievement is that, if one has already demonstrated creative outcomes, the probability to demonstrate other creative outcomes in the future is high. This type of approach is thus extremely limited when it comes to assess creativity in school settings, because it is rare to find creative achievement per se at the school age level (e.g., a published book or novel or released musical composition). Clearly, these measures are more adapted for adults who already demonstrated valuable creative outcomes, showed identifiable creative accomplishment, talents, expertise or special training in one or several creative domains.

**B. Measurement of Creativity as a Level - "How Creative is this Student?"** This question the implicitly refers to creativity as a continuous and unidimensional construct with the implicit idea that creativity is present in each individual to various degrees. There are

many candidate factors that serve the indicators of creative potential. These factors are of different nature: cognitive, conative, or environmental. Product-based assessment is also commonly used.

- **Measuring Cognitive Aspects:** Cognitive factors involved in creativity refer to basic processes of thought that lead to creative production, which include identifying, defining and redefining the problem, selective encoding (i.e., the ability to input environmental information related to a problem), divergent thinking, evaluation of ideas, associative thinking, and flexibility (see Lubart et al.). However, a common definition of creativity from the cognitive approach makes reference to divergent thinking only. Divergent thinking tests such as the Torrance Tests of Creative Thinking or the Wallach and Kogan tests are standardized tasks which evaluate the capacity of the individual to generate many ideas from a simple starting point, in a limited amount of time.

Other measures of cognitive abilities involved in creativity include measures of problem-solving such as the Purdue Elementary Problem-Solving Inventory which consists of tasks for sub-process aspects of creative problem solving (e.g., problem identification, problem definition, generating questions and guessing causes, clarifying the goal, analyzing details, or verifying solutions).

- **Measuring Conative Aspects:** Conative factors refer to preferred ways of behaving (personality and motivationally related). Conceptually, it is conceived that these factors facilitate (or inhibit) the effective use of cognitive factors involved in the creative process. Many self or informant rating scales and inventories are used such as, the Barron-Welsh Art Scale, or the Creative Perception Inventory in which individuals are asked to auto-evaluate themselves and check personality traits relative to creative personality or characteristics that typify their behaviour. Gough's Adjective Checklist is also used that includes a creative personality scale which captures more broadly the creative personality attributes.

The motivational dimension involved in creativity is also a factor often targeted to capture aspects of creative potential. Moneta and Siu showed that intrinsic motivation in school (measured using the Work Preference Inventory) predicted greater creativity in a writing task of story composition. Other measures include, for example, the Torrance Creative Motivation Scale.

- **Measuring Environmental Aspects:** Several environmental factors have been found to contribute to creative potential. These include factors such as parental practices, school environment, the effects of teaching methods and even birth order. There are quite a number of observational and/or rating scales for assessing environmental characteristics, classroom atmosphere and learning environments favourable to individual creativity. For example, the Classroom Activities Questionnaire.
- **Product-Based Assessment:** A common way to assess creative potential involves the achievement of a creative product based on initial elements or constraints. Typically, these products are then evaluated by experts of the domain using the Consensual Assessment Technique. Technically, domain-appropriate judges are asked to score independently a series of productions resulting from the same task, using a Likert scale (e.g. from "1- not creative at all", to "7-highly creative"). A statistical consensus is then estimated to ensure inter-rater agreement. The idea behind this procedure is that, if every expert agrees to "classify" the same creative products in the same order for their level of creativity (resulting in high inter-rater agreement), it is possible to conclude that raters have identified the same quality (that is, creativity). When the consensus is reached (as indicated by a statistical criteria), the scores given by each judge to each production can be averaged to derive a composite score of creativity. In other words, the accumulation and convergence of expertise by multiple informants for the same "subjective" quality results in a consensual measure.

**C. Measurement of Creativity as a Style - "How (and where)** is this Student Creative?" This question, built upon the previous tradition of creativity assessment that goes beyond the notion of "status", "degree", or "level" of creative potential, as emphasized in the "componential-unitary" measurement approach, and even more as in the "eminence" approach, which respectively put emphasis either on a dichotomous or on a unidimensional approach to creativity. Rather, it underlies the "form" that creative potential can take and it implicitly includes both questions "Where is this student creative?" (Creativity as a domain specific ability) and "How the creative potential of this student is expressed across various dimensions?" (Multifaceted concept of creative potential). Evaluation of Potential for Creativity (EPoC) is a modular, domain-specific tool, which presently includes verbal and graphic subtests that measure the two key modes of creative thinking-divergent-exploratory thinking and convergent-integrative thinking-in elementary and middle-school students. It is the first tool in the history of creativity assessment that combines an approach by domain of creative expression and by mode of thinking, in order to capture the diversity of creative abilities of children.

Another approach to evaluating student creativity is the assessment framework developed by Lucas, Claxton, and Spencer (2012) in harmony with the habits and sub-habits of creativity. Lucas, Claxton, and Spencer (2012) proposed a "Five Dimensional Model of Creativity" that identifies 5 core creative habits and 15 sub-habits of creativity. In addition to being a comprehensive model-incorporating aspects of both creativity and critical thinking-there is empirical evidence suggesting that this framework has the potential to be useful for teachers for assessing and tracking the development of students' creativity in schools.

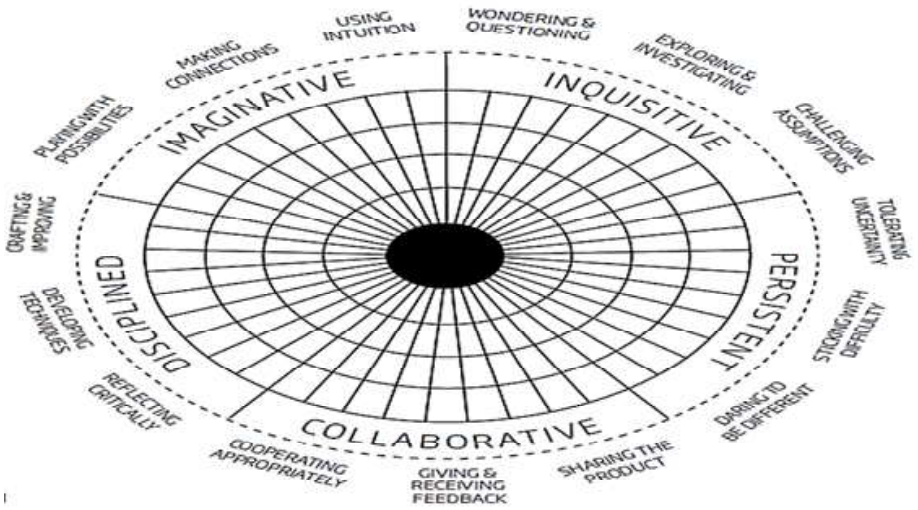



**FIGURE 14.1. Creativity Assessment Tool (Lucas, Claxton, & Spencer, 2012,)**

1. **Inquisitive:** Creative individuals are good at uncovering and pursing interesting and worthwhile questions in their creative domain.

- **Wondering and Questioning:** Beyond simply being curious about things, the questioning individual poses concrete questions about things. This enables him, and others, to think things through and develop new ideas.
- **Exploring and Investigating:** Questioning things alone does not lead to creativity. The creative individual acts out his curiosity through exploration, and the investigating individual follows up on her questions by actively going out, seeking, and finding out more.
- **Challenging assumptions:** A degree of appropriate scepticism is an important trait of the creative individual. This means not taking things at face value without critical examination.

2. **Persistent:** Creative individuals do not give up easily.

- **Sticking with difficulty:** Persistence in the form of tenacity is an important habit of mind enabling an individual to get beyond familiar ideas and come up with new ones.
- **Daring to be different:** Creativity demands a certain level of self-confidence as a prerequisite for sensible risk-taking as well as toleration of uncertainty.

- **Tolerating uncertainty:** Being able to tolerate uncertainty is important if an individual is going to move 'off of the starting blocks' on a project or task where actions or even goals are not fully set out.

3. **Imaginative:** At the heart of a wide range of analyses of the creative personality is the ability to come up with imaginative solutions and possibilities.

- **Playing with possibilities:** Developing an idea involves manipulating it, trying it out, improving it.
- **Making connections:** This process of synthesising brings together a new amalgam of disparate things.
- **Using intuition:** The use of intuition allows individuals to make new connections and arise at thoughts and ideas that would not necessarily materialise given analytical thinking alone.

4. **Collaborative:** Many current approaches to creativity, such as that of John-Steiner (2006), stress the social and collaborative nature of the creative process.

- **Sharing the product:** This is about the creative output itself impacting beyond its creator.
- **Giving and receiving feedback:** This is the propensity to want to contribute to the ideas of others, and to hear how one's own ideas might be improved.
- **Cooperating appropriately:** The creative individual co-operates appropriately with others. This means working collaboratively as needed, not necessarily all the time.

5. **Disciplined:** As a counterbalance to the 'dreamy', imaginative side of creativity, there is a need for knowledge and craft in shaping the creative product and in developing expertise.

- **Developing techniques:** Skills may be established or novel but the creative individual will practise in order to improve. This is about devoting time to a creative endeavour.
- **Reflecting critically:** Once ideas have been generated, evaluation is important. We could call this 'converging'. It requires decision-

making skills.

- **Crafting and improving:** This relates to a sense of taking pride in one's work. The individual pays attention to detail, corrects errors, and makes sure the finished article works perfectly, as it should.

This tool, pictured in Figure 14.1, invites the teacher to map students' habits graphically, thereby providing a formative assessment of creative thinking. Students also use the tool to self-assess their creative habits. Both teachers and students are provided with supporting materials for using the tool, including an online presentation and video explaining the construct of creativity, why assessment can be beneficial, and how they were expected to use the tool.



**CHECK YOUR PROGRESS**

**Q 9:** What are the different factors that serve as the indicators of creative potential?

.....

**Q 10:** Name the five core creative habits identified in the Five Dimensional Model of Creativity.

.....



## 14.7 LET US SUM UP

After going through this unit, it can be summarized as-

- Creativity is an ability to engage productively in the generation, evaluation and improvement of ideas that results in production of novel and useful ideas and establishment of new relationships.
- Creativity is seen as intelligent action that creates multiple solutions to problems by original and unique views (divergent) rather than limiting solutions by intelligence and logic (convergent).
- According to Wallas stage model, creative process is developed through 5 stages: preparation, incubation, intimation, illumination or insight and verification.

- Creativity here has four dimensions: Imitation, Relocation, Making connections, Method development.
- Creativity has eight properties; four cognitive and four affective.
- Characteristics of creativity are categorised into four categories: Generating Ideas, Digging Deeper into Ideas, Openness and Courage to Explore Ideas, and Listening to One's "Inner Voice."
- Four approaches are considered for classification of measurement tools based on the four main categories of creativity definitions: process, product, person and press.
- Measurement of creativity are generally grouped into three broad categories: Measurement of Creativity as a Status, Measurement of Creativity as a Level, Measurement of Creativity as a Style
- Assessment framework developed by Lucas, Claxton, and Spencer (2012) identifies 5 habits and 15 sub-habits for formative assessment of creative thinking.



## 14.8 FURTHER READING

1) Bruno-Faria, M., Fleith, D., Alencar, E. (2014): Theory and Practice of Creativity Measurement. United States: Sourcebooks.
2) Baer, J., Kaufman, J. C., Plucker, J. A. (2008): Essentials of Creativity Assessment, Germany: Wiley.
3) Creative Thinking of School Students. (2009): India: Discovery Publishing House.
4) Handbook of Creativity. (1999). United Kingdom: Cambridge University Press.
5) Spencer, E., Lucas, B. (2017): Teaching Creative Thinking: Developing Learners who Generate Ideas and Can Think Critically, United Kingdom: Crown House Publishing.
6) Spencer, E., Claxton, G., Lucas, B. (2012): Progression in Creativity - Developing New Forms of Assessment: A Literature Review, United Kingdom: Unknown Publisher.
7) Sarsani, M. R. (2006): Creativity in Schools, India: Sarup Book Publishers

## 14.9 ANSWERS TO CHECK YOUR PROGRESS

**Ans to Q No 1:** Creativity is an ability to be innovative and produce novel and useful ideas.

**Ans to Q No 2:** The researchers viewed the concept of "creativity" as (a) creative person,

(b) creative process, (c) creative product, and (d) creative environment.

**Ans to Q No 3:** Convergent thinking is using logic and knowledge to decrease the amount of possible outcomes whereas divergent thinking is foreseeing multiple solutions to a problem, having original and unique ideas.

**Ans to Q No 4:** Fivestages of creative process development are

- Preparation
- Incubation
- Intimation
- Illumination
- Verification

**Ans to Q No 5:** Two cognitive properties of Creativity are Flexibility and Originality.

Two affective properties of Creativity are Curiosity and Imagination.

**Ans to Q No 6:** The four approaches of measuring creativity are Process approach, Person approach, Product approach and Press approach.

**Ans to Q No 7:** Name of two tools that measure personality traits related to creativity:

- How Do You Think? (HDYT; Davis & Subkoviak, 1975)
- Creative Personality Scale (CPS; Gough, 1979)

**Ans to Q No 8:** Two characteristics of school environment that enhance creativity are physical environment and pedagogical environment.

**Ans to Q No 9:** Cognitive, Conative and Environmental factors serve as the indicators of creative potential.

**Ans to Q No 10:** Five core creative habits identified in the Five Dimensional Model of Creativity are: Inquisitive, Imaginative, Persistent, Collaborative and Disciplined.

## 14.10 MODEL QUESTIONS

**Short Questions** (Answer each question in around 150 words)

**Q 1:** Define the term creativity.

**Q 2:** Describe the five stages of creative process development.

**Q 3:** With the help of suitable example illustrate the four dimensions of creativity.

**Q 4:** List the characteristics of creative personality.

**Q 5:** State the properties of creativity.

**Long Questions.** (Answer each question in around 300-500 words)

**Q 1:** Explain the nature of creativity.

**Q 2:** Make a comparison between four approaches used for classification of measurement tools based on the four main categories of creativity definitions.

**Q 3:** Discuss the methods used to measure creativity as a status, creativity as a level, and creativity as a style.

**Q 4:** Discuss the relevance and application of assessment framework developed by Lucas, Claxton, and Spencer (2012) in school education.

*** ***** ***