DIPLOMA IN ELEMENTARY EDUCATION (D.El.Ed.)

Course-506
Understanding Children in Inclusive Context

Block -2
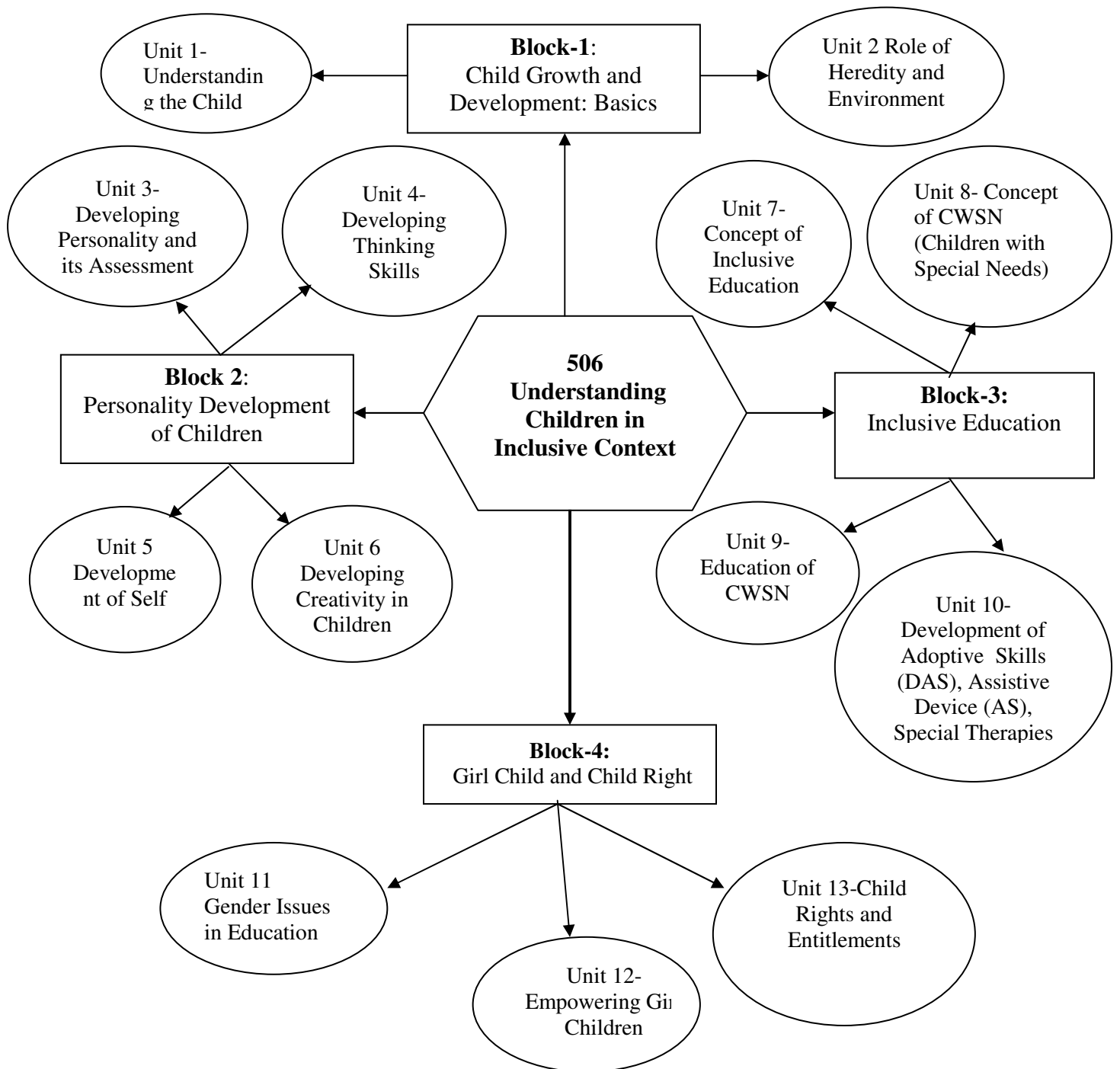## Personality Development of Children

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Course Concept Map for
Course-506 "Understanding Children in Inclusive Context"

Block-1:
Child Growth and
Development: Basics

Unit 1-
Understanding the Child

Unit 2 Role of
Heredity and
Environment

Unit 3-
Developing
Personality and
its Assessment

Unit 4-
Developing
Thinking
Skills

Unit 7-
Concept of
Inclusive
Education

Unit 8- Concept
of CWSN
(Children with
Special Needs)

**506
Understanding
Children in
Inclusive Context**

Block 2:
Personality Development
of Children

Block-3:
Inclusive Education

Unit 5
Development of Self

Unit 6
Developing
Creativity in
Children

Unit 9-
Education of
CWSN

Unit 10-
Development of
Adoptive Skills
(DAS), Assistive
Device (AS),
Special Therapies

Block-4:
Girl Child and Child Right

Unit 11
Gender Issues
in Education

Unit 12-
Empowering Girl
Children

Unit 13-Child
Rights and
Entitlements

Credit Points (8=6+2)

Block	Unit	Name of Unit	Theory Study Hours		Practical Study
			Content	**Activity**	
Block-1: Child Growth and Development: Basics	**U1**	Understanding the Child	6	3	• Identification of factors affecting growth & development of your school children
	U2	Role of Heredity and Environment	6	3	• Prepare a list of Hereditary influence on the learners of your class • Find out the characteristics about the impact of environment on the siblings from a family in your school
Block 2: Personality Development of Children	**U3**	Developing Personality and its Assessment	8	4	• Trace the differences in personality characteristics among the learners of your class
	U4	Developing Thinking Skills	8	4	• Identification of steps taken to develop questioning skill in your learner
	U5	Development of Self	10	5	• Identification of classroom condition of developing self-concept
	U6	Developing Creativity in Children	9	7	• Listing the situation created by you as a teacher in your class for fastening creativity
Block-3: Inclusive Education	**U7**	Concept of Inclusive Education	6	3	• Listing the factors affecting inclusive education in your school
	U8	Concept of CWSN (Children with Special Needs)	7	4	• Identification of learning requirement of CWSN in your school
	U9	Education of CWSN	9	6	• Preparation of action plan of home-based education
	U10	Development of Adoptive Skills (DAS), Assistive Device (AS), Special Therapies (ST)	9	3	• Seminar on special therapies regarding any impairment experienced in your school

Block-4: Girl Child and Child Right	U11	Gender Discrimination	9	6	• Identification of roles of your school on gender issues
	U12	Empowering Girl Children	9	6	• Listing our your role to develop life skills in girls of your school
	U13	Child Rights and Entitlements	9	6	• Listing out violation of child rights in your schools & the locality
		Tutoring	15		
			120	60	60
Grand Total			**120+60+60=240 hrs.**		

Block -2
Personality Development of Children

Block Units

Unit 3 : Development of Personality and Assessment
Unit 4 : Developing Thinking Skills
Unit 5 : Development of self
Unit 6 : Development Creativity in Children

BLOCK INTRODUCTION

Personality development of children

The as a learner will study Block 2 : Personality development of children. This block consists four units related to development of personality, thinking skills and creativity in children. Each unit divided into selections and subsections. Earlier you have studied block 1: Basics of child growth and development.

Unit-3 : Development of Personality and Assessment

This unit will help you two understand concept of personality and its nature. You can enlist the various characteristics of personality. You will be able to discuss some important theories of personality i.e. trait theory of personality, Psychoanalytic theory of personality etc. You will know about the development of different aspects of personality i.e. self concept, motivation, attitudes and values. This unit will also empower you to discuss various methods of assessing personality and role of a the teacher in the personality development of students.

Unit-4 : Developing Thinking Skills

After reading this unit you can describe the need of development of thinking skills in child. You can understand need and importance for developing thinking skills in child. You will able to discuss stages of thinking through Piagets Theory. Bruner's Theory and information processing theory. You can explain types, tools of thinking and development of critical, convergent and divergent thinking. You will be able to discuss the role of school and teacher in development thinking skills.

Unit-5 : Development of self

After completing this unit you can understand development of self concept in children and factors affecting it. You can explain the process of development of values and role of discipline. You can define attitude and enlist its various components and also discuss the role of teacher in development of good attitude in children. You will be able to discuss perception and its development motivation and its development as well as enhancing motivation.

Unit-6 : Development Creativity in Children

This unit will help you to understand the concept and nature of creativity. You can identify the different types of creativity. in students and factors affecting creativity. You can discuss various strategies for developing creativity i.e. brain storming, attribute listing, instructional materials, questioning etc. You will know how to develop learning material of poster creativity as well as role of ICT. You will be able to assess creativity through various tools.

CONTENTS

Sr. No.	Unit Name	Page No.

UNIT 3   DEVELOPMENT OF PERSONALITY AND ASSESSMENT

STRUCTURE

3.0 INTRODUCTION

In the previous unit we have discussed the role of Heredity and Environment. In this unit we will discuss development of personality and its assessment. We shall mainly focus on nature and concept of personality, characteristics of personality, and theories of personality, assessment of personality and role of teachers in personality development.

3.1 LEARNING OBJECTIVES

After studying this unit, you will be able to,

* state the meaning of personality.

- list out the characteristics of personality.

- develop the awareness of assessing personality.

- describe the role of teachers in the development of personality of children.

3.2 NATURE AND CONCEPT OF PERSONALITY

The term "personality" is derived from the Latin word "Persona" which means the mask worn by the Roman actors? In this sense, personality means the individual as seen by others. Personality is the totality of everything about a person his/her physical, emotional, mental, social, ethical and spiritual make-up.

In simple terms, personality consists of the following

1. The way you look.

2. The way you dress.

3. The way you talk.

4. The way you walk.

5. The way you act.

3.3 CHARACTERISTICS OF PERSONALITY

1. Personality is what one is: This means that personality traits are developed in each individual upto a stage in life, after that they get stabilised on the other hands one cannot borrow any others persons; whatever is visible is what is inside a person.

2. Personality of each individual is unique: Each individual's characteristics are different from other individuals. Even twins are not the same in personality characteristics.

3. Personality is dynamic and not static: Personality traits, though selective present in each individual (due to the interplay of heredity and environment), get brushed up from time to time. Though there cannot be new addition to personality traits, however each trait can be brushed up as per changing times

4. Personality functions as a unified whole: each person's personality expression is the sum total of what one has- one cannot hide one's traits in totality while interacting with others

5. Personality is the product of both heredity and environment: An individual inherits personality traits by birth, and simultaneously those traits are nourished through upbringing. Further, the socio-cultural and economic environment also contributes to development of certain personality traits.

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6. Personality is through and through social: The personality traits of an individual get nourished and brushed up (and some get reduced) due to social forces and interactions.

7. Personality is continually adjusting itself to environment: Though personality traits of an individual are generally inherited at birth, those traits get influenced by environment, and get adjusted to changing environment from time to time.

8. In rare cases personality influences the environment: Largely, one gets influenced by the environmental factors/forces, but sometimes dominating personalities, to an extent, influence the environment surrounding then.

9. Personality is always striving for certain ends: Personality traits are not for nothing- there is a purpose (or purposes) in very individual's personality. According, one fixes the goals of life and tries to achieve those.

10. Personality is self-consciousness. We do not attribute personality to animals: Human beings have mind to things- so human personality is a thinking process. Though animals do not have such things, even individuals need to be made aware of their traits and abilities, and act accordingly.

Check Your Progress- 1

List and describe any two characteristics of personality with suitable examples?

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3.4 THEORIES OF PERSONALITY

Some of the important theories of personality are discussed as under

3.4.1 TRAIT THEORY OF PERSONALITY

G.W. Allport, R.B. Cattell and H.J. Eysenck are the chief exponents of the trait theory of personality. A trait is a dimension of personality which can be measured and must describe the consistent behaviour of an individual. A trait as a dimension is conceived quantitatively as a continuous scale of measure-ment from extensive positive end to the extreme negative end. A trait in order to be a meaningful measure of human personality, most be a distinctive and 'enduring' characteristic of an individual. According to the trait theorists, if we confine ourselves to a few basic characteristics which are consistent and distinctive of the human personality, the problem of describing it should become simpler.Theorists often distinguish

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between the traits which are readily observed and those which are 'deeper' and nearer to the core personality. One of the approaches to the trait theory describes the readily observable traits as 'surface traits' and the deeper ones as 'source traits'

Twelve Basic Traits

1.	Cyclothymia Emotionally expressive, frank, Placid	Vs.	Schizothyomia Reserved, close-mouthed, anxious
2.	General Mental Capacity Intelligent, smart, assertive	Vs.	Mental Defect Unintelligent, dull, submissive
3.	Emotionally Stable Free of neurotic symptoms, Realistic about life	Vs.	Neurotic Emotionally Variety of neurotic symptoms, evasive, immature
4.	Dominance Self-assertive, confident, Aggressive	Vs.	Submissiveness Submissive, unsure, complacent
5.	Surgency Cheerful, joyous, humorous, Witty	Vs.	Desurgency Depressed, pessimistic, dull
6.	Positive Character Preserving, attentive to people	Vs.	Dependent Character Fickle, neglectful of social chores
7.	Adventurous Cyclothymia Likes meeting people, strong Interest in opposite sex	Vs.	Withdrawn Schizothyomia Shy, little interest in oppositesex
8.	Sensitive Emotionally dependent, immature Mature, gregarious, attentionseeking	Vs.	Mature:Tough, Posed Independent-minded, Self-sufficient
9.	Socialised, Cultured Mind Polished, poised, composed, introspective, sensitive	Vs.	Boorishness Awkward, socially clumsy,crude
10.	Trustful, Cyclothymic Trustful, understanding	Vs.	Parancis Suspicious, jealous
11.	Bohemian, Unconcernedness Uncoventional, eccentric, fitful hysterical upsets	Vs.	Conventional Practically Conventional, Unemotional
12.	Sophistication Logical mind, cool, aloof	Vs.	Simplicity Sentimental mind, attentive to people

3.4.2 PSYCHOANALYTIC THEORIES OF PERSONALITY

(a) Sigmund's Theory of Personality

Sigmund Freud (1856-1939) was the founder of psychoanalysis His theory of psychoanalysis is dynamic and based on the assumption that per-sonality and

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personality development are determined by conflicts and events that are largely unconscious in nature and which can be understood only by its in depth study.Freud's anatomy of personality is built around the concept of id, ego and super ego. Each of these aspects of personality is related to the other two. Personality is a three-tier system of Id, Ego and Super ego. The Id is totally unconscious; Ego is partly conscious; and Super Ego is totally conscious. The Id is the primary aspect of personality. Freud believed that Id is a mass of blind instincts. It has no logical organization. Indeed contradictory impulses may exist in it side by side. Id is amoral. It possesses no sense of values It cannot distinguish between good and evil. It is dominated by the pleasure principle. The Id processes are unconscious Id is best characterised as the conative, unconscious aspect of personality.

Libido and Infantile Sexuality

Libido is that part of the Id structure that seeks its gratification from purely sexual activity. Sexual gratification is like other gratifications and should be considered a normal need of an individual. Freud considered it as the total striving of an organism. Freud stressed that libido was always present in the organism, even in the infant. Every child is born with an organically determined sexual excitability. Libido can be stimulated through the following zones.

1. Oral Zone: From birth to 2 years. At this stage, the infant gets pleasure from sucking the lips.

2. Anal Zone: From 2 to 3 years. The child derives much pleasure through anal expulsion or anal manipulation.

3. Genital Zone or Phallic Stage: From 3 to 5 years, the child derives gratification by touching his genitals.

4. Latency Stage: From the age of six till about thirteen, there is the latency stage where there is avoidance of sexuality on account of the pres-sures of society.

5. Fixation Stage: During this period of adolescence, homosexual and heterosexual interests develop.

Freud found that most of his patients suffered on account of sex repres-sion i.e. non-gratification of sex. Sublimation of sexual desires helps in the development of an integrated personality.

(b) Alfred Adler (1870-1937)

According to Adler, self-assertion rather than sex impulse is the major drive. Alfred's theory minimized the role of sex on which Freud so much concentrated. Adler thinks that every individual strives to develop a unique style of life in which sexual drive plays a minor role.Adler thinks that inadequacy of childhood is primarily responsible for the development of feeling of inferiority in the

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beginning. This feeling of inferiority arises from a sense of incompleteness or imperfection in life. It helps to strive for a higher level of development. We have the example of Demosthenes who sturrered as child but became one of the greatest orators of the world. Similarly President Roosevelt of America was a weakling in his youth but by systematic exercise later on became a physically strong man.A person's behaviour to overcome his feeling of inferiority to achieve feeling of superiority is revealed through his style of life. There are different ways in which a person can strive to be superior. The style of life is the principle by which the personality of an individual functions. The style of life is shaped by two factors—inner self and the forces within the environment. Experiences of early life have great influence on the style of life of an individual. Adler believes that each individual creates a self-structure out of his heredity endowment and the impressions he receives from his environment Adler states that while style of life is mechanical, the creative self is inven-tive and makes something that never existed before. The creative self gives meaning to life. It is influenced by nurture. Adler stresses the impact of social interaction. Working for the welfare of others compensates one's weakness and inferiority complex. It helps him to express his superior feelings.

(c) Carl Jung (1875-1961)

Jung considered personality in terms of introversion and extroversion concepts which have become part of our everyday speech. According to Jung, mental activity takes four dominant forms: sensation, thinking, intuition and feeling. Thinking and feeling are polar opposite and both tendencies are always present in the individual at the same time. If his or her dominant mental activity is thinking, the individual's unconscious tends towards feeling. Similarly, sensing and intuition are opposite. Both are operative in the individual at the same time.

General Characteristics of Extrovert and Introvert

Extrovert	Introvert
1. Fluent in speech.	1. Better at writing than at speech.
2. Free from worries.	2. Inclined to worry.
3. Likes to work with others.	3. Likes to work alone.
4. Friendly.	4. Rather reserved.
5. Not easily embarrassed.	5. Easily embarrassed.
6. Interested in athletics.	6. Found of books and magazines.
7. Governed by objective data.	7. More influenced by subjective feeling.
8. Flexible and adaptable	8. Lacking in flexibility.
9. Neglectful of ailments and personal belongings.	9. Careful of these.

10. Aggressive.	10. Submissive.
11. Unscrupulous.	11. Scrupulous.
12. Popular with people	12. Not popular with people.

The majorities of individuals demonstrate characteristics of both the introvert and extrovert and are accordingly classi-fied as ambiverts.

Obviously, where so many conflicting and diverse tendencies are opera-tive, there is a great danger of one-sided development. One aspect of the personality of the individual tends to become dominant and totally overshad-ows the other Jung believes that the total personality consists of three elements of conscious ego, personal unconscious and collective unconscious.

(i) The Conscious Ego: It is in fact, the sense of "being" which includes conscious aspects of thinking, feeling and remembering.

(ii) The Personal Unconscious: It includes repressed and suppressed experiences of the individual which are accessible to the conscious. It also includes the experiences of the individual which he has in his social environ-ment.

(iii) The Collective Unconscious: It is primitive in nature. It is the reservoir from which all other systems emerge.

Check Your Progress-2

Name and briefly describe any two theories of personality.

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3.5 DEVELOPMENT OF PERSONALITY

In this section we will discuss how different aspects of personality could be developed.

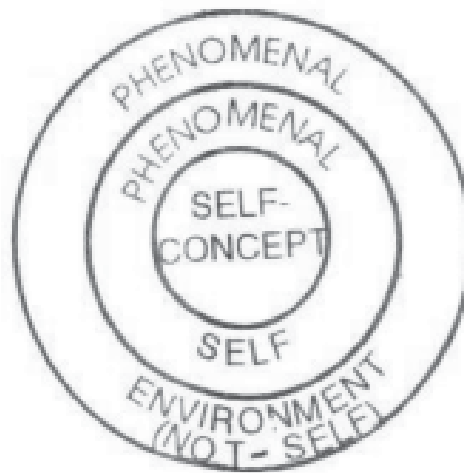These aspects include self-concept, motivation, attitudes, and values

3.5.1 SELF – CONCEPT

The development of personality of an individual is to a great extent dependent upon his view about him/herself. The emergence of a positive self-concept is likely to lead to a well-developed, harmoniously developed personality. It is, therefore, important that the children are made to learn from the very beginning

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to develop positive self-concept which is socially desirable. The child's perception or view of him/herself is called self-concept(see the figure below). The part of the environment in which he/she lives is known as his/her phenomenal self and the rest of the environment of which he/she is aware or to which he responds is called phenomenal environment or perceived environment and not self. Self-concept is what the individual thinks of his/her actual self:"It is me".

A new born infant finds the world a confused mass. As he/she grows up, he begins to differentiate. He/she slowly begins to distinguish between what belongs to him. He/she reacts to the world which he/she perceives. The perception of oneself changes with maturity. With the change in perception behaviour also changes. Praise and blame, rewards and punishments and the personality of the teacher influence the self-concept of children. Lives of great men provide motivation for developing positive self-concept and therefore students should be asked to study their lives. Thus, the teacher should guide them to set realistic goals which are in accordance with their reach to attain them. Setting unrealistic goals is likely to develop frustration and despair.

3.5.2 MOTIVATION

The term motivation refers to the "arousal of tendency to act to produce one or more effects."Motivation is the process of arousing, sustaining and regulating activity.

Classroom Motivation: Different Techniques

Students in the classroom learning need constant motivation from the teacher so that optimum use of their talents may be made for their development of motivation.Since individual children differ in regard to their specific needs according to their personality patterns and socio-economic back-ground, the teachers will have to vary their motivational techniques and employ them judiciously. In other words, every individual pupil should be led towards goal

that he is aware of and will want to attain. Secondly, goals should be within each pupils's reach, and should seem attainable to him. Thirdly, he should be able to judge whether or not he is attaining his goals and how he is falling short. Fourthly, a teacher should not rigidly and strictly adhere to one technique of motivation but he should make use of all techniques judiciously and scientifically.

1. Attractive Physical and Environmental Conditions

   First of all the teacher should attend to the physical conditions of the classroom. There should be no distracting factors in and around the classroom. Noise, strong light and some undesirable scenes often distract the attention and do away with the interest. Abnormal temperature is also a disturbing element. Mo-notony creates boredom.

   The rooms should be ventilated and tastefully decorated. There must be flowery plants in the school compound. Cleanliness should be stressed ade-quately.

2. Sublimation of Innate Impulses

   Most of the behaviour of small children is directed by their innate impulses. Children are very curious by nature. They like to do many things. Every new and strange things attract them. An efficient teacher will stimulate the im-pulse of curiosity. He will always start the lesson be exhibiting some very new and strange aspect of the same. Similarly, children like to construct things. The teacher should encourage the children to learn by constructing and creating things.

3. Stimulus Variation by the Teacher

   It has teen generally observed that children are not able to attend to one thing for a very long period. The effectiveness of the teaching-learning process depends to a great extent on the stimulus variations used by the teacher behaviour. Some of the common teacher behaviours in the classroom which fall under variation are:

   (i) Teacher movement

   (ii) Teacher gestures

   (iii) Changes in speech pattern

   (iv) Changes in sensory focus

   (v) Changes in postures.

4. Reinforcement: Praise and Blame

   These may be classified as:

   a) Positive Verbal Reinforcement—Following a pupil's answer, the teacher verbally indicates pleasures at the pupil's response by the use of words like 'Good', 'Fair', 'Excellent', 'Correct', etc.

b)   Positive Non-Verbal Reinforcement—That include:

- Nods and smiles.

- Teacher's friendly movements towards pupils.

- Teacher's friendly look.

- Teacher writing student's response on the blackboard

c)   Negative Non-Verbal—This comprises gestures—sneering, frown-ing, expression of annoyance, impatience, etc.

d)   Negative Verbal—This includes comments like 'No', 'Wrong', 'No good', 'poor', 'of course not', etc.

5.   Extrinsic Learning Rewards and Punishment

The process of giving rewards and punishment is known as reinforcement. Rewards, whether material or symbolic and psy-chological, enhance and satisfy child's safety, belonging and esteem needs, and as such are capable of acting as incentives. Material rewards seem to work better for poor children and symbolic rewards seem to work better for children from rich homes.

6.   Pleasure and Pain

According to the oldest theory of behaviour, pleasant experience which give satisfaction are sought after and painful experiences are avoided by an individual. This theory has direct implication in classroom teaching-warning. The teacher must provide pleasant and satis-fying experiences to the students so that they are motivated for further learning.

7.   Attainable Goal

There should be a goal to be reached in every lesson. Only then the student can endeavour to continue their efforts to a particular direction. The goal must be made clear to students.

8.   Experience of Success

Experience of success motivates a child to continue an activity. The teacher should, therefore, make school work, both curricular and co-curricular, sufficiently varied so that each pupil has a chance to experience success at his own level. He must ensure frequent and regular experience of success or re-inforcement throughout all phases of learning, but particularly during the earlier and more difficult phases.

9.   Competition and Co-operation

Competition is a spur to activity. But competition on individual basis is likely to be unequal and therefore threatening to some students. Competition

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between groups makes it possible to spread the share of success or failure. Co-operation too provides motivation since it provides social situation to learners when they find satisfaction of their acceptance and belonging needs.

10. Knowledge of Progress

   Pupil's knowledge of their progress, of how well they are moving towards their goal is a very effective form of motivation. It also helps them put greater efforts. Individual progress charts not only inform a child about how he is doing but also keeps the child involved in learning activity.

11. Novelty

   The striving toward self-actualization makes pupils search the new and the different. Field trips, excursions, dramatics, sports, literary activities, etc., safety the pupil's needs for self-actualization by providing them opportunities. But their safety needs require that they should know beforehand when and how the new experiences will be provided.

12. Individual Differences of the Children

   Children have different interests and capabilities. All the children cannot be motivated alike for ail the lessons at all time. It is the duty of the teacher to discover individual interests and capabilities of children to motivate them accordingly.

13. Teaching Skills

   Teaching skills of the teacher greatly influence motivation. It is not easy to give an exact number of teaching skills in-volved in motivating students in the class. Commonly identified skills in the teaching-learning process may be listed as under:

   (i)   Skill in introducing the topic.

   (ii)   Skill in putting questions.

   (iii)   Skill in dealing with pupil's answers

   (iv)   Skill in stimulus variations.

   (v)   Skill in the use of blackboard or the chalkboard

   (vi)   Skill in handling teaching aids and other equipments

   (vii)   Skill in non-verbal cues

   (viii) Skill in reinforcement.

   (ix)   Skill in the use of illustrations and examples.

   (x)   Skill in the exposition of sub-matter.

   (xi)   Skill in explanation

(xii)   Skill in encouraging group discussion

(xiii) Skill in planned repetition.

(xiv) Skill in thawing out conclusions from students

(xv)   Skill in teacher liveliness

(xvi) Skill in the closure of the lesson

(xvii) Skill in using appropriate methods of teaching

14.   Teacher's own Motivation and Interest in Teaching

The teacher must be interested in what he is teaching and in the children whom he is teaching. If he is not interested in the work himself, he can never motivate the class. It may be said that a teacher who has been teaching the same subjects to the same classes for years tends to lose interest. But this is not the fact. The subject-matter may be the same but the children are not the same. Even the subject-matter is changing and developing. Moreover, with experience the teacher will discover new approaches and methods of teaching even the same subject-matter.

3.5.3 ATTITUDES

One of the chief objectives of education is the development of desirable attitudes in the students. The students must develop several attitudes in the students such as –attitude towards studies, self,friends, certain ideals etc. An attitude is dispositional readiness to certain institutions, persons or objects in a consistent manner which has been learned and has become one's typical mode of response. For eg,one's views towards food or drink, sports ,maths or democracy are attitudes. It includes certain aspects of personality such as interests, appreciation and social conduct. An attitude is learnt or adopted.

3.5.4 VALUES

A value stands for ideals men live for. They are the guiding principles of life which are conducive to one's physical, social and mental health. Values may be defined as (i) What we believe-professed values (ii) What we practice-operational values, and (iii) What we learn from experience in order to adapt and renew traditions received from the past-traditional values.

a)   List of Values

1.	Truth	31.	Dignity of Labour
2.	Beauty	32.	Socialism
3.	Goodness	33.	Punctuality
4.	Co-operation	34.	Humanity

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5.	Courage	35.	Social Service
6.	Citizenship	36.	Regularity
7.	Comparison	37.	International understanding
8.	Devotion	38.	Patriotism
9.	Discipline	39.	Self-control
10.	Duty	40.	Patience
11.	Tolerance	41.	Self confidence
12.	Equality	42.	Curiosity
13.	Dignity of Individual	43.	Wisdom
14.	Friendship	44.	High Thinking
15.	Freedom	45.	Senseof Responsibility
16.	Humbleness	46.	Fearlessness
17.	Honesty	47.	Good will
18.	Good Behaviour	48.	Loyalty
19.	Simple living	49.	Kindness
20.	Justice	50.	Generosity
21.	National Consciousness	51.	Dedication
22.	Peace	52.	Good Character
23.	Respect for others	53.	Moral virtues
24.	Non-violence	54.	Spirituality
25.	Curiosityfor knowledge	55.	Politeness
26.	Obedience	56.	Modesty
27.	Self-respect	57.	Good Temper
28.	Sympathy	58.	Insight
29.	National Integration	59.	Sacrifice
30.	Leadership	60.	Simpleliving and High thinking

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b) Ways and Means of Inculcating of Values (Role of Education)

Relating to the inculcation of values, it would be sufficient to say that values are not taught or made to learn but the students themselves attain them. If we again and again say to the students that they should always speak the truth, telling a lie is a sin it would not make them to learn speaking the truth and not leave telling of lies. But if the teacher instead of giving such types of sermons himself follows the path of truth and the students find a teacher always speaking the truth, it would definitely have some impact on the children and it is possible that they might adopt the path of truth. For example Gandhi had seen the drama of Harish Chander and this drama had an indelible impact on his mind and Gandhi adopted the path of truth for the whole of his rest of life. Therefore, about values it can be said that values are not taught, but they are caught. Therefore, it should be the effort of school or the teachers to inculcate such values among the students which they want. These should syncronise with the environment of the school and the conduct of the teacher.

In addition to whatever has been said above value education can be provided to the students through other different mediums. These means or mediums are as given below:

1. Morning Assembly

   Before starting the teaching work in the schools, it is very necessary to hold a morning assembly. Its duration should be between 15-20 minutes. No doubt, there should be a prayer in the assembly, but besides prayers, there should also be provision for religious discourses, patriotic songs, moral lectures by the teachers and students off and on according to the times. Such types of provisions can be made in the morning assembly.

2. Compulsory Subject

   By compulsory subject, here it means that moral education should be given the name of a subject and taught as a compulsory subject like other subjects. This moral subject should contain the substance of all the religions and not the knowledge of any one particular religion. It should contain those principles which are the essence of all the religions equally. There should be a provision of at least two periods in a week for this subject in the time table. Redesigning of Curriculum. In order to provide value education, there is a need of redesigning of curriculum. In some subjects, some changes should be made of such a type that these subjects can be taught keeping in view the social moral, cultural and national values. It is possible through the subjects like History, Geography, Social Studies, Languages, Literature, Art and Music etc.

3. Extension Lectures

   Such scholars should be invited to the insti-tution from time to time which

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have an inseparable relation with the moral subjects. These invited scholars should express their views on the subjects of human interests under extension lectures.

4.   Declamation Contests

Declamation contests should be organized in the schools on the subjects or headings relating to educational values. The students should be encouraged to take part in these contests.

5.   Skits and Dramas

Value education can be provided quite conveniently through the medium of skits and dramas in the schools. The subject matter of skits and dramas should be related to moral, social and cultural values.

6.   Celebration of Birthdays

The birthdays of those great men should be celebrated in the schools which preached higher values all through their lives and presented their ideal form before the society. For example, the birthday of Mahatma Gandhi, Guru Nanak, Guru Gobind Singh, Buddha, Jawaharlal Nehru and Dr. S. RadhaKrishanan should be celebrated in the schools. Celebration of their birthdays would given inspiration to the students and they would try to follow the path shown by them.

7.   Celebration of International Days

International days should be celebrated in the schools as the World Peace Day. Human Rights day etc. By doing so there would be the development of world brotherhood among the students.

8.   Use of Mass-Media

Maximum use of mass-media should be made to give value education to the students. The use of newspapers. journals, doordarshan and radio etc. can produce awakening among the students towards values.

9.   National Service Scheme

The spirit of social service and national service can be inculcated among the students through the medium of National Service Scheme. By doing works relating to service, moral, so-cial and cultural development can be made in the students.

10.   Value Oriented Magazines

Whatever magazines are published by the schools, the articles which are compiled in it should be of such a nature through which the students could get some education and lead to their character development.

11.   Role of the Teacher

The teacher should play an important role in the inculcation of educational

values. All these resources are used by the teacher which have been mentioned above. We have already discussed the role of the teacher in this respect. Whatever a child learns after coming into this world he learns by imitating the others. For students, the teacher is their ideal and they copy the life styles of their teachers. The teacher should present their ideal before the students for the inculcation of these values among the latter. The attitude of the teacher should be liberal. A teacher can provide value oriented education only when he himself has faith in it. There should be no difference between what a teacher says and what he actually does.It should always be the endeavour of the teacher that whenever there is something in the context of value he should at once elucidate the same and should give emphasis to value oriented education Teacher is the only personality in the society through which the social, moral, cultural and spiritual development of students is possible. Therefore the personal life of the teachers should be above board, neat and clean and worthy to be imitated so that he is able to leave an indelible imprint of his personality on his students.

Check Your Progress- 3

Briefly describe the factors responsible for the development of personality.

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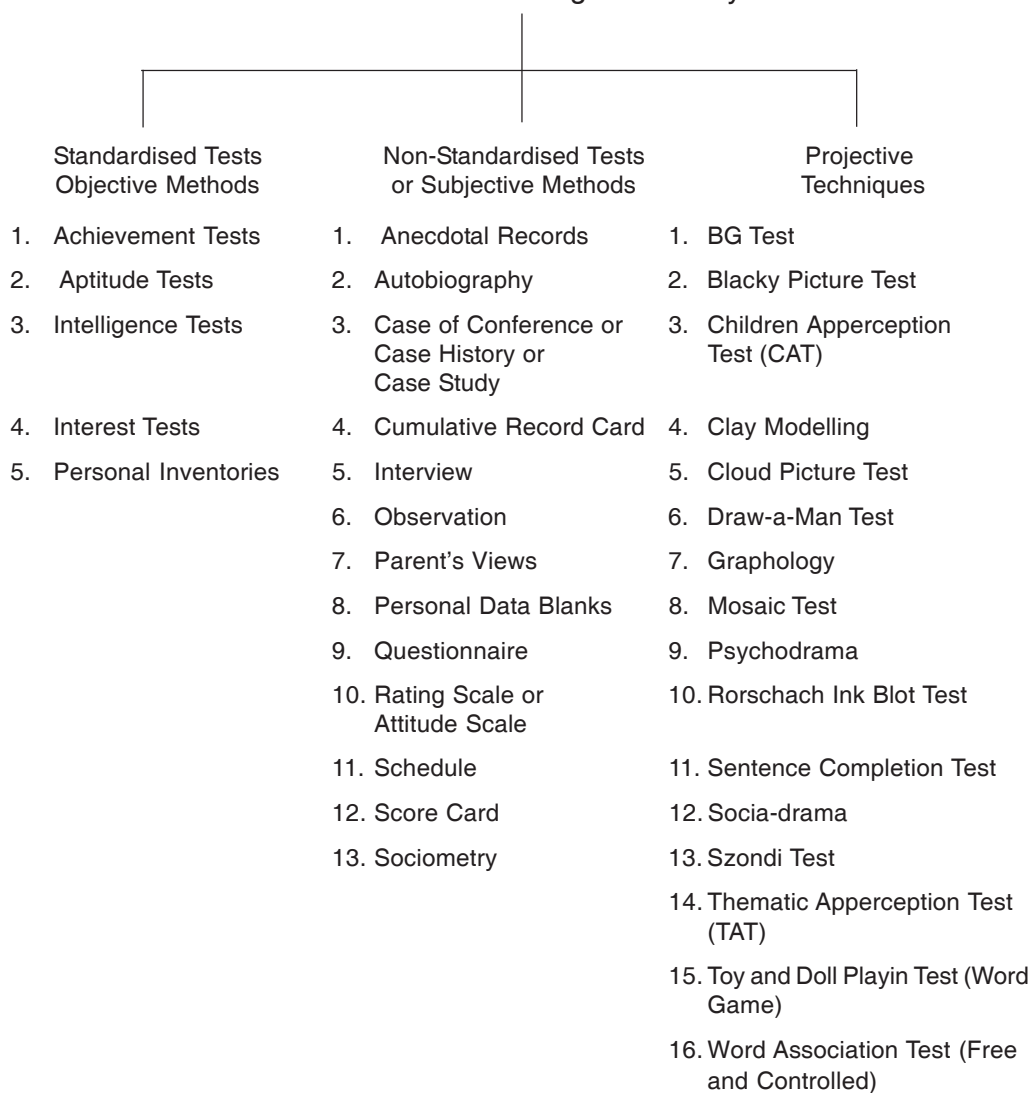
3.6 ASSESSMENT OF PERSONALITY

Methods of assessment are broadly classified as (i) Objective methods(ii) subjective methods and (iii) Projective methods.Firstly, methods and techniques are also categorized as standardized and non-standardized. There are self-reporting methods in which the person to be assessed, reports about himself. Such methods include autobiography, interviews, questionnaires, etc. and personal inventory.Secondly, there are rating techniques in which assessment is done on the basis of what others say about an individual. Such methods include all types of rating scales, biographies, case history, etc.Thirdly, we use behavioural measures in which the actual behaviour of the individual in real life situations is observed.Fourthly, there are projective techniques which use the reactions of the person to imaginative situations involving fantasy. Lastly, there are machines and technical instruments with which we can assess some personality variables.

Notes

Methods of Assessing Personality

Standardised Tests Objective Methods	Non-Standardised Tests or Subjective Methods	Projective Techniques
1. Achievement Tests	1. Anecdotal Records	1. BG Test
2. Aptitude Tests	2. Autobiography	2. Blacky Picture Test
3. Intelligence Tests	3. Case of Conference or Case History or Case Study	3. Children Apperception Test (CAT)
4. Interest Tests	4. Cumulative Record Card	4. Clay Modelling
5. Personal Inventories	5. Interview	5. Cloud Picture Test
	6. Observation	6. Draw-a-Man Test
	7. Parent's Views	7. Graphology
	8. Personal Data Blanks	8. Mosaic Test
	9. Questionnaire	9. Psychodrama
	10. Rating Scale or Attitude Scale	10. Rorschach Ink Blot Test
	11. Schedule	11. Sentence Completion Test
	12. Score Card	12. Socia-drama
	13. Sociometry	13. Szondi Test
		14. Thematic Apperception Test (TAT)
		15. Toy and Doll Playin Test (Word Game)
		16. Word Association Test (Free and Controlled)

✸ Check Your Progress-4

What are the methods to assess personality? Describe each one of them

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3.7 ROLE OF THE TEACHER IN THE PERSONALITY

DEVELOPMENT OFSTUDENTS

Some of the important guidelines for teachers are as under:

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- **Attention:** Following points deserve mention:

1. One of the best methods of developing personality is to pay due attention to children.

2. The quality of attention counts.

3. If children ask a question, the teacher should try to answer it immediately. They are important and they need to be paid attention. If the teacher brushes them aside, they get the impression that they are ignored and they lose confidence.

- **Discipline :**

1. The teacher should be fair, frank, honest, and loving, but firm and consistent.

2. Rules too gentle are seldom obeyed, too severe seldom executed

3. Discipline should be tailored to children's needs.

- **Example :**

1. Children should be impressed by actions which speak much louder than words.

2. The teacher should be careful about how he lives. He may be the only textbook some of the children will ever read.

- **Fun :**

The teacher must have fun with them once in a while. This is also educational in its own way.

- **Inspiration :**

The secret of providing inspiration as a teachers is to

- Know what he is doing

- Love what he is doing

- Believe in what he is doing.

- **Love :**

It is a popular saying: "Love the child and the child will love you. Hate him and he will hate you."

- **Patience :**

For a child to be trained by love takes a lot of patience.

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- **Praise :**

1. Children thrive on praise. It is one of the most important parts of teaching.

2. If a child lives with criticism, he learns to condemn. If he lives with praise, he works hard to top capacity.

3. It is important to praise a child for his good behaviour than it is to scold him for his bad behaviour.

- **Understanding :**

To understanding children, a teacher must first understand himself. It may be emphasized that the teacher is not concerned with one or the other aspect of the development of the personality of a child. He is expected to be all things to all pupils – a physician concerned about their physical health, a mental hygienist leading them carefully to sound mental health, a philosopher guiding them painstakingly in their search for truth, a moralist assisting and encouraging them to acquire goodness, and artist helping them to find beauty. He must be a minister ministering to their every need. Such a ministry calls for dedicated service.

Check Your Progress- 5

Is a teacher responsible for the development of personality in her/his the students? Discuss briefly.

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3.8 LET US SUM UP

The term "personality" is derived from the Latin word "Persona" which means the mask worn by the Roman actors. In this sense personality means the individual as seen by other. Personality is what one is. Personality of each individual is unique. Personality is dynamic and not static. Personality functions as a unified whole. Personality is the product of both heredity and environment. There are many theories of personality which speak about the development of personality and have important educational implications. A child's understanding of self, his attitudes, the motivation he gets and the values he develops help in the development of his personality. A teacher plays a major role in the development of a child's personality. Personality can be measured by objective, subjective and projective methods.

3.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress-1

i)   Personality of each individual is unique

ii)   Personality is dynamic and not static.

Check Your Progress-2

Trait theory of personality and psychoanalytic theory of personality.

Check Your Progress-3

Self-concept, motivation, attitudes and values

Check Your Progress-4

(i) Objective methods(ii) subjective methods and (iii) Projective methods.

Check Your Progress-5

Yes.The teacher should pay attention to the child, love, understand and praise the child so that he develops a good personality.

3.10 SUGGESTED READINGS AND REFERENCES

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3.11 UNIT END EXERCISES

1. Define personality.

2. What are the characteristics of personality?

3. What are the different ways to measure personality?

4. Explain one theory of personality.

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UNIT 4 DEVELOPING THINKING SKILLS

Structure

4.6. Empowering child to take rational decisions based on thinking

    4.6.1. Decision Making

    4.6.2. Factors influencing decision making

    4.6.3. Six steps decision making process

    4.6.4. How thinking can lead to better decision making in children

4.7. Facilitating questing skill among children in classroom

    4.7.1. What are questioning skills?

    4.7.2. Development of questioning skills in children

    4.7.3. Uses of questioning strategies in the field of education

    4.7.4. Advantages of questioning

    4.7.5. Guidelines to enhance questioning skills among children in classroom

4.8. Role of school and teacher in developing thinking skill

    4.8.1. How teachers can stimulate thinking skills in children

    4.8.2. Classroom techniques employed to develop thinking skills in children

4.9. Let us sum up

4.10 Answers to Check your progress

4.11 Suggested Readings & References

4.12 Unit End Exercises

4.1. INTRODUCTION

"Thinking is the hardest work there is, which is probably the reason why so few engage in it"–Henry Ford

According to Gerett, thinking is a behaviour which is often implicit and hidden and in which symbols (ideas, images, and concepts) are ordinarily employed.

Based on a set of definitions, thinking can be understood as that process where external events of past, present or future are represented internally, and it may also include even a thing or an event which is not directly observed or experienced by the individual. Another set of definition rolls out thinking in terms of a behaviour that leads to finding solution to impending problem.

The various components involved in thinking process are signs and symbols, concepts, motor activities, language, images, experiences, familiarity, and mental operations. A person's thinking is influenced by a number of factors namely

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nature of intellect, mental set, attitude and values, interest and need, habits and adjustment, family and school environment, stages of growth and development, personality factors, mental health, motives, and last but not the least the individual's emotions. In this unit the various aspects related to thinking skills like need and importance of developing thinking skills in children, the different types of thinking, major differences between critical and creative thinking, steps involved in rational decision making, and on how to encourage questioning skills in children has been discussed.

4.2. LEARNING OBJECTIVES

After going through this unit, you will be able to

• Narrate the need for developing thinking skills in children

• Differentiate between Convergent thinking and Divergent thinking

• Demonstrate the importance of critical thinking for academic success

• Narrate the stages of rational decision making

• Provide conducive environment to develop questioning skills in children

• Prepare and /or use suitable teaching learning material (TLM) and foster thinking skills in classes

4.3. WHY DEVELOPMENT OF THINKING SKILL IN CHILD?

"THINK BETTER TO BE BETTER"

Being educated is not enough to utilize human potential or to meet the needs of the world of work or to be a good citizen of a country. Children are to be equipped with a varied range of competencies to face an uncertain and unpredictable future. In this era people are exposed to diverse problems in diverse contexts at different times throughout their lives. Nowadays job markets as well as societies are looking out for people who can comprehend, judge and participate in generating new knowledge and processes. Developing countries are in need of citizens who can assimilate information from multiple sources, determining its truth and use it to make sound judgements. Real challenge for the educators is to develop educational programmes that will enable all individuals to become effective thinkers as it is required by all.

4.3.1. WHAT ARE THINKING SKILLS?

Thinking skills are the mental processes that we apply when we seek to make sense of experience. It refers to the human capacity to think in conscious ways to achieve certain purposes. Such processes include remembering, questioning,

forming concepts, planning, reasoning, imagining, solving problems, making decisions and judgements, translating thoughts into words and so on. A thinking skill is a practical ability to think in ways that are judged to be more or less effective or skilled. They are the habits of intelligent behaviour learned through practice, for example children can become better at giving reasons, or asking questions the more they practice doing so.

Many researchers have attempted to identify the key skills in human thinking, and the most famous of these is Bloom's Taxonomy. Knowledge, comprehension, and application are basic or lower order thinking skills whileanalysis, synthesis, and evaluation are higher order thinking skills.

4.3.2. NEED AND IMPORTANCE FOR DEVELOPING THINKING SKILLS IN CHILD

Thinking skills will enable us to learn from our experience and to utilize our intellect. Improving the quality of thinking skill is directly linked to better learning and there by maximize the potential towards betterment of society.

According to Mike Fleetham, "In our evolving world, the ability to think is fast becoming more desirable than any fixed set of skills or knowledge. We need problem solvers, decision makers and innovators. And to produce them we need new ways to teach and learn. We need to prepare our children for their future, not for our past. As a person becomes more proficient, thinkers move from being merely recipients of information to become manipulators and judges of information and ultimately to discoverers and creators of information.

Most of the growth in the human brain occurs in early childhood. By the age of 6, the brain in most children is approximately 90% of its adult's size. This implies that interventions will be more effective in the early years, while the brain is still growing, than at a later stage. Growing interest in ways of developing children's thinking and learning skills is the result of finding about how the brain works and how people learn and that specific interventions can improve children's thinking and intelligence. If thinking is how children make sense of learning then developing their thinking skills will help them get more out of learning and life. A thinking skills approach suggests that learners must develop awareness of themselves as thinkers and learners, practice strategies for effective thinking and develop the habits of intelligent behaviour that are needed for life long learning.

Check your progress 1

1. Name the lower order and higher order thinking skills as per Bloom's taxonomy

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4.4. STAGES, TYPES AND TOOLS OF FACILITATING THINKING

4.4.1. STAGES OF THINKING

Research findings indicate that the ability to think is correlated to growth and development of an individual. Infants use more of abstract thinking skills while a grown up person is able to think in abstract terms as well. Theories of Jean Piaget, Bruner and Information Processing explain stage wise development of thinking.

4.4.1.1. PIAGET'S THEORY

Piaget tried to provide a satisfactory explanation of the development of thinking in individuals through the successive stages of cognitive development. In Piaget' views Adaptation underlies cognitive development. Adaptation is the process of building mental representations of the world through direct interaction with it. Two basic components of adaptation are assimilation and accommodation. Assimilation is the tendency to fit new information into existing mental frameworks to understand the world in terms of existing concepts, schemas, and modes of thought. Accommodation is the tendency to alter existing concepts or mental frameworks in response to new information or new recognizable dimensions of the external world. Piaget suggests that the tension between these two components fosters adaptation and cognitive development.

The stages of cognitive development are

- **Sensory motor stage**: infants gradually learn that there is a relationship between their actions and the external world. They discover that they can manipulate objects and produce effects. They know about the world through motor activities and sensory impressions. Towards the end of sensory motor stage an infant develops an understanding that objects continue to exist even when they are hidden from view.

- **Preoperational stage**: In this stage infants acquire the ability to forms mental images of objects and events. They start to think in terms of verbal symbols. Though their thought processes are advanced than the previous stage, they are limited by **ego centrism**: they have difficulty understanding that others may perceive the world differently than they do. They lack seriation- ability to arrange objects in order along some dimension. They do not have the

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knowledge of **conservation**- knowledge that certain physical attributes of an object remain unchanged even though the outward appearance of the object is altered.

- **Concrete operations stage**: The mastery of conservation marks the beginning of the stage of concrete operations. Children at this stage think more like adults than like younger children at earlier stages. They gain understanding of relational terms and seriation. They come to understand reversibility-the fact that physical changes can be undone by a reversal of the original action. They also begin to use concepts in describing and thinking about the physical world. Children in this stage begin to engage in logical thinking.

- **Formal operations stage**: In this stage children can think abstractly. They become capable of hypothetico-deductive reasoning-involves formulating a general theory and deducing specific hypotheses from it. They are also capable to engage in propositional reasoning-reasoning in which individuals can assess the validity of verbal assertions even when these refer to possibilities rather than actual events.

4.4.1.2. BRUNER'S THEORY

According to Bruner one's thought processes evolve as a result of maturation, training and experiences through a series of sequential stages. The stages are enactive representation, iconic representation and symbolic representation.

- Enactive representation stage is characterized by the child's representation of things and events in terms of motor responses and activities. His thought processes are represented through non verbal activities.

- Iconic representation stage is characterized by the child's representation of things and events in terms of sensory images or mental pictures.

- Symbolic representation stage is characterized by the child's representation of things and events in terms of words, symbols and other abstract phenomena.

4.4.1.3. INFORMATION PROCESS THEORY

- According to this theory, thinking is connected with the information one receives from the environment through one' senses and the nature or thought process depends on how it is utilized by the individual from the time he perceived it until the time he processes it at various depth levels in solving his problem or chalking out a strategy or plan. The stages are sensory processing, retrieval of relevant information from memory and manipulation of information.

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4.4.2. TYPES OF THINKING

This session throws light on different types of thinking.

Convergent thinking is the type of thinking that focuses on coming up with the single, well-established answer to a problem. It is oriented toward deriving the single best, or most often correct answer to a question.

Divergent thinking involves breaking a topic down into its various component parts in order to gain insight about the various aspects of the topic.

Abstract thinking is characterized by the ability to use concepts and to make and understand generalizations, such as of the properties or pattern shared by a variety of specific items or events.

Concrete thinking is characterized by a predominance of actual objects and events and the absence of concepts and generalizations.

Reflective thinking is a part of the critical thinking process referring specifically to the processes of analyzing and making judgments about what has happened. Dewey (1933) suggests that reflective thinking is an active, persistent, and careful consideration of a belief or supposed form of knowledge, of the grounds that support that knowledge, and the further conclusions to which that knowledge leads.

Inductive thinking process is often referred to as "generalizing" because it essentially means that one begins with specific details or facts and progresses to a general principle as a conclusion. It is based on probability, not certainty.

Deductive thinking Deductive thinking claims that it's *logically necessary* that if the premises are all true then so is the conclusion." If deductive logic is used accurately and correctly, accurate points or arguments will lead to an accurate conclusion or result.

Logical thinking is the process in which one uses reasoning consistently to come to a conclusion. Problems or situations that involve logical thinking call for structure, for relationships between facts and for chains of reasoning that make sense.

4.4.3. TOOLS OF THINKING

Thinking tools are those techniques that can help us in using our minds systematically and effectively. With the use of thinking tools, the intended ideas will be arranged more systematically, clearly, and easy to be understood. Questioning, Concepts, Mind maps, Cognitive Research Trust (CoRT), are a few tools that facilitate thinking

4.4.3.1. QUESTIONING

"A person who asks questions is a person who thinks."- William Wilen

One of the simplest and easiest ways to develop kids' thinking skills is by wording questions in the right way. When teachers and parents learn to ask questions that stimulate kids' thought processes, learning can be fun for children of all ages. Questioning is one approach to motivate others to: get information, test understanding, develop interest, and evaluate the ability of individuals towards understanding certain things.

A W-H question is an influential, inspirational and imaginative checklist to generate:

- Data-gathering questions, during the early stages of problem solving when you are gathering data.

- Idea-provoking questions (e.g. whilst brainstorming). Criteria for evaluating options.

According to Blooms Taxonomy different types of questions require us to use different kinds or levels of thinking. **Knowledge**, **comprehension**, and **application** are more **concrete thinking skills**. **Analysis**, **synthesis**, and **evaluation** require more abstraction and are known as **critical thinking skills**. To test one's **Knowledge** skilluse words and phrases such as: how many, when, where, list, define, tell, describe, identify, etc., which will draw out factual answers and test child's recall and recognition skills. To find out **Comprehension** skill use words such as: describe, explain, estimate, predict, identify, and differentiate, etc., to encourage your child to translate, interpret, and extrapolate. To test **Application** skills use words such as: demonstrate, apply, illustrate, show, solve, examine, classify, and experiment, etc., to encourage your child to apply knowledge to situations that are new and unfamiliar. For **Analysing** skills use words and phrases such as: what are the differences, analyze, explain, compare, separate, classify, arrange, etc., to encourage your child to break information down into parts. To test **Synthesis** skills Use words and phrases such as: combine, rearrange, substitute, create, design, invent, what if, etc., to encourage your child to combine elements into a pattern that's new. To check **Evaluation** skills use words such as: assess, decide, measure, select, explain, conclude, compare, and summarize etc., to encourage your child to make judgements according to a set of criteria.

4.4.3.2. CONCEPTS

Concepts are general ideas that we use to identify and organize our experience. If words are the vocabulary of language; concepts are the vocabulary of thought. Aristotle once said that an intelligent person is a 'master of concepts '.

The structure of Concepts involves:

- Sign - word/symbol that names the concept

- Referents - examples of the concept

- Properties - qualities that all examples of the concept share in common.

Concept formation happens through the interactive process of Interpreting and Generalizing. Interpreting is the process of finding examples of the concept while Generalizing is the process of focusing on the common properties shared by a group of things.

4.4.3.3. MIND MAPS

A mind map can be defined as a visual presentation of the ways in which concepts can be related to one another. It's the Ultimate Learning Tool! It helps to save time as it uses only keywords (or concepts), to understand better, to increase one's ability to remember by utilizing the seven principles of Super Memory: Visualization, Association, Making Things Outstanding, Imagination, Colour, Rhythm, and Holism. Mind maps are useful for note taking (listening), oral presentation (speaking) as well as writing

The steps involved in mind mapping

- Draw the topic at the centre.

- Add the Sub-Headings.

- For each Sub-Heading, Add the Main Points and Supporting Details.

- Use your Imagination (pictures/images) to make it outstanding and memorable.

4.4.3.4. COGNITIVE RESEARCH TRUST (CORT)

The essence of the CoRT (Cognitive Research Trust) thinking method is to focus attention directly on different aspects of thinking and to crystallize these aspects into definite concepts and tools that can be used deliberately. It is designed to encourage students to broaden their thinking. CoRT Thinking Tools are C&S: Consequence and Sequel, AGO: Aims, Goals, Objectives (purpose) OPV: Other People's Views APC: Alternatives, Possibilities, Choices, PMI: Plus, Minus, Interesting (ideas), FIP: First Important Priorities and CAF: Consider All Factors.

In **Consider All Factors (CAF)** individual lists down all the factors and consider each factor. In **First Important Priorities (FIP)** individual has to choose from a number of different possibilities and alternatives. In **Plus, Minus, Interesting (PMI)** individual lists down all the plus points, all the minus points and all the interesting points. In **Alternatives, Possibilities, Choices (APC)** individual

generates new alternatives and choices, instead of feeling confined to the obvious ones. In **Other People's Views (OPV)** individual moves out of one's own viewpoint to consider the points of view of all others involved in any situation. In **Aims, Goals, Objectives (AGO)** individual picks out and defines the objectives so as one is clear about his own aims and understanding those of others (Purpose). In **Consequence and Sequel (C&S)** individual considers the immediate, short (e.g. 1 - 2 years), medium (e.g. 2 - 5 year) and long term (e.g. over 5 years) consequences.

✂ CHECK YOUR PROGRESS-2

2. Enumerate the stages of cognitive development in Piaget's theory.

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3. Name the CoRT thinking tools?

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4.5. DEVELOPMENT OF CRITICAL, CONVERGENT, AND DIVERGENT THINKING

In this era of technological advancement we are bombarded with different genres of information. To face global challenges and crises individuals must that have the capability

* to think independently,

* to relate,

* to evaluate,

* to question,

* to analyse, and

* to think creatively

4.5.1 CRITICAL THINKING

Critical thinking is a process that challenges an individual to use reflective,

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reasonable, rational thinking to gather, interpret, and evaluate information in order to derive a judgment.

Critical thinking should be the ultimate goal of all education. John Dewey defines critical thinking as "reflective thought" rather than routine thought; it's the process of "active, persistent, and careful consideration" of the credibility and conclusions of supposed knowledge or information. Teachers should nurture minds to become adept at this kind of critical interaction with information. In order to display critical thinking, students need to develop skills in interpreting, analysing, reasoning, and evaluating. Students who develop critical thinking skills are able to achieve better marks, become less dependent on teachers and textbooks, create knowledge and evaluate, challenge and change the structures in society.

Developing a habit of questioning is basic to critical thinking. According to Edward Glaser there are a few abilities underlie critical thinking. They are ability to

- Recognise problems

- Find workable means to meet those problems

- Gather and marshal pertinent information

- Recognise unstated assumptions and values

- Comprehend and use language with accuracy, clarity and discrimination

- Interpret data

- Appraise evidence and evaluate statements

- Recognize logical connections between statements

- Draw warranted conclusions and generalizations

- Test the conclusions and generalizations arrived at.

4.5.1.1. STAGES OF DEVELOPMENT OF CRITICAL THINKING

The 6 stages involved in the development of critical thinking are as follows:

- Stage One: The Unreflective Thinker (Individual is unaware of significant problems in thinking)

- Stage Two: The Challenged Thinker (Individual is aware of problems in thinking)

- Stage Three: The Beginning Thinker (Individual try to improve but without regular practice)

- Stage Four: The Practicing Thinker (Individual recognize the necessity of regular practice)

- Stage Five: The Advanced Thinker (Individual advance in accordance with practice)

- Stage Six: The Master Thinker (skilled & insightful thinking becomes second nature)

Development of critical thinking takes place when one:

1) accept the fact that there are serious problems in thinking and

2) begin regular practice.

4.5.1.2. CHARACTERISTICS OF CRITICAL THINKERS

Sir Francis Burton has noticed that the individuals who are regarded as critical thinkers are

- Inquisitive

- See relationships as well as distinctions among things

- Ask questions

- Reflect

- Consider multiple points of view

- Support their viewpoints and argues on the basis of evidence and reasons

- Capable to judge the credibility of sources and make independent decisions about information

- Alert to all deception.

4.5.2. CONVERGENT THINKING

Convergent thinking is a term coined by Joy Paul Guilford as the opposite of divergent thinking. It generally means the ability to give the "correct" answer to standard questions that do not require significant creativity, for instance in most tasks in school and on standardized multiple-choice tests for intelligence.

Convergent thinking is the type of thinking that focuses on coming up with the single, well-established answer to a problem. It is oriented toward deriving the single best, or most often correct answer to a question. Convergent thinking emphasizes speed, accuracy, and logic and focuses on recognizing the familiar, reapplying techniques, and accumulating stored information. It is most effective in situations where an answer readily exists and simply needs to be either recalled or worked out through decision making strategies. A critical aspect of convergent thinking is that it leads to a single best answer, leaving no room for ambiguity. In this view, answers are either right or wrong. The solution that is derived at the end of the convergent thinking process is the best possible answer the majority of the time.

Convergent thinking is also linked to knowledge as it involves manipulating existing knowledge by means of standard procedures. Knowledge is another important aspect of creativity. It is a source of ideas, suggests pathways to solutions, and provides criteria of effectiveness and novelty. Convergent thinking is used as a tool in creative problem solving. When an individual is using critical thinking to solve a problem they consciously use standards or probabilities to make judgments.

4.5.2.1. CONVERGENT THINKING IN CLASSROOM

Convergent thinking can be used practically in many situations. The most obvious use for convergent thinking is when answering multiple choice questions on a test. When a student contemplates the possible answers available, they use convergent thinking to weigh alternatives within a construct. This allows one to find a single best solution that is measurable. In this instance, convergent thinking assesses the available answers and compares them against each other in order to narrow all the options to one best solution.

Convergent thinking is a fundamental tool in a child's education. Today, most educational opportunities are tied to one's performance on standardized tests that are often multiple choices in nature. Thus, it is necessary to promote convergent thinking from a young age, as this will lead children to develop the ability to deduce a single correct solution. The different ways to promote convergent thinking in young children include: jigsaw puzzles that only go together one way or simple math questions that only have a single answer. This will teach children the importance of deducting a single best answer to subjects requiring convergent thinking such as math or tests requiring multiple choices.

4.5.3. DIVERGENT THINKING

The goal of divergent thinking is to generate many different ideas about a topic in a short period of time. It involves breaking a topic down into its various component parts in order to gain insight about the various aspects of the topic. Divergent thinking typically occurs in a spontaneous, free-flowing manner, such that the ideas are generated in a random, unorganized fashion. Following divergent thinking, the ideas and information will be organized using convergent thinking; i.e., putting the various ideas back together in some organized, structured way.

4.5.3.1. METHODS THAT STIMULATE DIVERGENT THINKING

- **Brainstorming**: A technique which involves generating a list of ideas in a creative, unstructured manner. The goal of brainstorming is to generate as many ideas as possible in a short period of time. The key tool in brainstorming is "piggybacking," or using one idea to stimulate other ideas. During

the brainstorming process, ALL ideas are recorded, and no idea is disregarded or criticized. After a long list of ideas is generated, one can go back and review the ideas to critique their value or merit.

- **Keeping a Journal**: Journals are an effective way to record ideas that one thinks of spontaneously. By carrying a journal, one can create a collection of thoughts on various subjects that later become a source book of ideas. People often have insights at unusual times and places. By keeping a journal, one can capture these ideas and use them later when developing and organizing materials in the prewriting stage.

- **Free writing**: When free-writing, a person will focus on one particular topic and write non-stop about it for a short period of time. The idea is to write down whatever comes to mind about the topic, without stopping to proofread or revise the writing. This can help generate a variety of thoughts about a topic in a short period of time, which can later be restructured or organized following some pattern of arrangement.

- **Mind or Subject Mapping**: Mind or subject mapping involves putting brainstormed ideas in the form of a visual map or picture that that shows the relationships among these ideas. One starts with a central idea or topic, then draws branches off the main topic which represent different parts or aspects of the main topic. This creates a visual image or "map" of the topic which the writer can use to develop the topic further.

- **Six Thinking Hats**:The premise of the method is that the human brain thinks in a number of distinct ways which can be deliberately challenged, and hence planned for use in a structured way allowing one to develop tactics for thinking about particular issues. Edward De Bono identifies six distinct directions in which the brain can be challenged. In each of these directions the brain will identify and bring into conscious thought certain aspects of issues being considered. Six distinct directions are assigned a colour.

- **White**- focuses on Data and information

- **Red**- focuses on feelings, intuition, emotion

- **Yellow**- focuses on Optimism, Benefits

- **Black**- focuses on Caution, Critical judgment

- **Green**- focuses on Creative thinking

- **Blue** –focuses on Process control, thinking about thinking (meta cognition)

4.5.3.2. STAGES OF CREATIVE THINKING

Graham Wallas found that though there were individual differences in the ways creative people thought, there was a recurring pattern. Creative thinking proceeds in five stages.

- **Stage 1-Preparation:** A person who develops a creative solution to an important problem generally spends long periods of time immersed in the problem, gathering knowledge relevant to it and working on it.

- **Stage 2- Incubation:** Creative solutions often emerge after a period of incubation. Incubation refers to the interval during which the person involved stops working actively on the problem and turns to other matters.

- **Stage 3-Illumination:** Creativity does often involve a sudden illumination or insight. At such times, individuals report that they suddenly see the first glimmer of a solution they have been seeking for months or even years.

- **Stage 4-Evaluation:** Considerable refinement must follow illumination. The idea must be worked out, translated into testable form, and then actually tested. Only when evidences indicate that it does work is the creative solution carried out to its final conclusion.

- **Stage 5-Revision**: Frequently the insight turns out to be unsatisfactory and the thinker is back at the beginning of the creative process. In other cases, the insight is generally satisfactory but needs some modification.

4.5.3.3. CHARACTERISTICS OF CREATIVE THINKER

Individuals who think creatively seem to have some personality features in common. Evidence obtained from objective and subjective tests indicates that creative people tend to have the following traits:

- They prefer complexity and some degree of imbalance in phenomena

- They are more complex psychodynamically and have greater personal scope

- They are more independent in their judgements

- The are more self assertive and dominant

- They reject suppression as a mechanism for the control of impulse

A personality dimension called origence has been shown to be related to creativity. People high on this dimension "resists conventional approaches that have been determined by others and would rather do his or her thing, even if it is unpopular or seems to be rebellious or nonconforming.

Creative thinkers are found to be

- curious

- seeks problems

- enjoys challenge

- optimistic

- able to suspend judgment

- comfortable with imagination

- sees problems as opportunities

- sees problems as interesting

- problems are emotionally acceptable

- challenges assumptions

- doesn't give up easily: perseveres, works hard

4.5.3.4. BARRIERS TO CREATIVE THINKING

The unquestioning consensus inhibits an individual's natural creative abilities. Rather than looking for ways to *inspire* creativity, one should just realize the truth. Every individual is capable of creative thinking at all times, but have to strip away the imaginary mental blocks that one has picked up along the way to wherever they are today. A few barriers to creative thinking are prejudice, functional fixedness, learned helplessness, tendency to find the "right" answer, logical thinking, following Rules, being practical, all work, and no play, not ready to try a different job or responsibility, being a "serious" person, avoiding ambiguity, belief that being wrong is bad, and a lack of belief in being creative.

The process of wakening one's creativity is similar to the path reported by those who seek spiritual enlightenment. Individuals are already creative, but it is that they have to strip away all of their delusions to see it.

4.5.3.5. WAYS TO FOSTER CREATIVE THINKING?

Teachers and significant others in the lives of children can make a difference through fostering creative thinking. The following are the most common ways in which one can foster creativity.

- Develop a broad and rich knowledge base

- Foster independence

- Encourage the use of analogies

- Encourage curiosity

- Enhance positive affect

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CHECK YOUR PROGRESS-3

4. What does the blue coloured hat indicate among the 6 thinking hats of Edward De Bono?

    ....

    ....

    ....

5. Name the steps involved in creative thinking?

    ....

    ....

    ....

4.6. EMPOWERING CHILD TO TAKE RATIONAL DECISIONS BASED ON THINKING

Every living being in this world makes decisions. Decisions are made every second of his life. What to wear, What to buy, What to eat, What to tell, What not to take, What not to use, What not to see….answers are the products of decision making. The effectiveness and efficiency of decisions determine its quality. Each and every aspect of life needs a person to make decisions. The better the decisions the smoother and successful the life is going to be.

4.6.1. DECISION MAKING

Decision making is the process of choosing among various courses of action or alternatives. In other words it is a kind of problem solving in which we are presented with several alternatives, among which we must choose. A perfect rational decision maker would consider

➢   the utility or value of the outcomes each alternative might yield

➢   the probability that such results would actually occur

Decision will be made on the basis of expected utility, the product of the value and the probability of each possible outcome.

4.6.2. FACTORS INFLUENCING DECISION MAKING

The major factors that influence decision making are heuristics, framing, and escalation of commitment.

Heuristics are mental rules of thumb that permit us to make decisions and judgments in a rapid and efficient manner. Heuristics are extracted from past experience and serve as simple guidelines for making reasonably good choices quickly and efficiently. Three commonly used heuristics are *availability heuristic, representativeness heuristic* and *anchoring & adjustment heuristic.*

Framing is another factor that influences the decision making of individuals. Framing is the representation of information concerning potential outcomes in terms of gains or losses. If emphasis of information is on loss then people will not consider that as an option. Human beings have a natural tendency to embrace positive information. Hence framing can have a major effect on decision making

Escalation of commitment is the tendency to become increasingly committed to bad decisions even as losses associated with them increase.

4.6.3. SIX STEPS DECISION MAKING PROCESS

The six step decision making process is a rational decision making process. It is based upon thinking about, comparing and evaluating various alternatives. The steps are as follows:

- define the situation and the desired outcome

- research and identify options

- compare and contrast each alternative and its consequences

- make a decision or choose an alternative

- design and implement an action plan

- evaluate results

It is widely used in schools to teach children how to make decisions. Six step decision making process is less complex compared to other ethical decision making models. This model is used in organizations so that employees can be empowered to make decisions appropriate to their rank and responsibility.

4.6.4. HOW THINKING CAN LEAD TO BETTER DECISION MAKING IN CHILDREN

Possibility to always come up with right and perfect decisions is a mirage. But these guidelines will increase number of better decisions.

➢ Decisions based on available information and the information that readily comes to our mind need not be the accurate one. So do not blindly trust memory and make decisions as one has to careful about the possibility of availability. Critical and creative thinking will provide the most accurate information required for making decisions.

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➢ Never consider situations at its face value. Always dare to question the various possibilities and get doubts clarified. Critical thinking will ensure that the decision you make works in your favour.

➢ Flexibility should be your key word. As decision making involves lot of effort there is a possibility to be loyal to one's decisions. If there is a need to change your decision to get better results one should be ready to do so. Critical thinking will help a person not to get trapped in their initial decisions and hence avoid severe consequences.

➢ While making a decision one should always consider all the available options. One should never be under the assumption that the options known are the only ones available. Critical thinking and creative thinking will come handy in such situations.

Better thinker is a better citizen. As children are tomorrow's citizens empowering children to make right decisions will make sure that future of the world will be safe and secure in their hands. As rational decision making will help him face life, to overcome peer pressure and live life in the most appropriate way.

CHECK YOUR PROGRESS IV

6. Narrate the steps of Rational decision making process.

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4.7. FACILITATING QUESTIONING SKILL AMONG CHILDREN IN CLASSROOM

We all use questions in order to get what we want or need; questions are an essential part of the communication system that has evolved in humans and they are certainly helpful in a gregarious species such as ours where we need to exchange information for our survival.

"Rather than teach children answers, we should show them how to ask questions ... then they would discover the answers for themselves."

4.7.1 WHAT ARE QUESTIONING SKILLS?

Questioning skills refer to one's ability to formulate and respond to questions about situations, objects, concepts, and ideas. Questions may derive from oneself or from other people. There are low-level questions and high-level questions. Low level questions require one to recall information that has been registered in

memory. They operate on the individual's level of knowledge of a subject. Higher level questions require one to process information rather than simply recall it. They operate on one's ability to comprehend, apply, analyze, synthesize, and evaluate information. High-level questions are of two types: description and comparison. Description questions require that one observe or describe an object using illustrations, demonstrations, maps, graphs, or tables. Comparison questions require that one examine two or more objects or ideas and use statements or illustrations to identify similarities and differences.

There are convergent questions as well as divergent questions. The former will have only one correct answer, while Divergent questions can have more than one appropriate answer.

4.7.2. DEVELOPMENT OF QUESTIONING SKILLS IN CHILDREN

Questions are an essential part of speaking and listening and as such should be introduced from the very earliest age. In terms of pre-school and school experience these skills continue to develop and very young children will respond verbally to questions such as, 'What is this?' when the person playing with them indicates a ball or crayon or may respond by touching or pointing when asked, 'Where is the sand?' It is debateable when the crossover comes from simply hearing and recognising the word 'sand' and knowing that a question has been asked and that it requires an answer. The quality of a child's communication skills will clearly depend in large part on the quality of their early relationships and the environment that they grow up in. For the development of critical thinking, the tendency to question and ask doubts is basic.

4.7.3. USES OF QUESTIONING STRATEGIES IN THE FIELD OF EDUCATION

Questioning strategies help instructors to- effectively plan class participation activities, to design homework assignments, and to write exams. It also helps them to match their goals or objectives for a subject/course with the actual components of the same. The other functions carried out by questioning strategies are to motivate and to interest, to reveal prior misconceptions, to evaluate, to guide thinking, to discipline, manage, or control, to encourage involvement of passive learners, to diagnose strengths and weaknesses, to understand how students form concepts, to help students form the habit of reflection, to gain insight about students' interests, to increase students' incentive to inquire, to help students learn to construct meaning, to help students set realistic expectations, to summarize information, to relate concepts, to provide student feedback, and to give listening clues.

For students, questioning strategies help to categorize and anticipate exam

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questions, allowing for more effective preparation. They are also useful in group study-to test each other's level of subject knowledge and to focus on specific topics. They improve the student's ability to clarify, reorganize, and accurately explain new information. Questioning helps in self-assessment as well as self-monitoring.

4.7.4. ADVANTAGES OF QUESTIONING

Questions and questioning techniques influence learners' achievement, attitudes, and thinking skills. The level of the question tends to obtain a similar level of answer. Achievement can improve if high levels of questions are accompanied by wait-time, redirection, and probing techniques. One advantage of questioning strategies is they are flexible and widely applicable. They may be tailored to fit the needs of different subjects, various types of information, and different levels of competence. Questioning strategies may be used by instructors and students alike. Students may use the strategies with the help of a facilitator or they may develop the skills on their own.

4.7.5. GUIDELINES TO ENHANCE QUESTIONING SKILLS AMONG CHILDREN IN CLASSROOM.

• Create an atmosphere of trust and encourage questions.

• Encourage divergent questions.

• Reduce the number of questions that can be answered by only "yes" or "no."

• Do not stop the discussion with the right answer.

• Increase wait-time between asking and answering questions to at least five seconds.

• Provide good halting times.

• Develop sensitive listening techniques.

• Develop silent time.

• Appreciate questions that are appropriate to the developmental level.

• Model good questioning skills.

• Ask them to come up with their own student questions in the lesson, quiz, or assignments.

• Respond in an encouraging way.

• Have interesting topics of discussion.

4.8. ROLE OF SCHOOL AND TEACHER IN DEVELOPING THINKING SKILL

Education is the process of human development. Intellectual or mental development is possible by improving the power of thinking. For improving thinking process, the teacher should try to understand his students and the devices for better thinking. Teaching and instructions are planned and organized for improving the power of thinking. The following are the devices used for improving the power of thinking.

- Objectives of teaching and instruction

- Curriculum development

- Preparing textbooks and instructional material

- Methods of teaching and techniques of teaching

- Models of teaching

- Evaluation and diagnosis

- Remedial teaching and instruction

4.8.1. HOW TEACHERS CAN STIMULATE THINKING SKILLS IN CHILDREN

- Use teaching strategies that foster *both* the development of thinking skills and the mastery of subject matter under consideration.

- When learners succeed at tasks of any kind, focus their attention on and label the thinking skills that have enabled them to be successful.

- Encourage students to reflect on what they do that is effective and to give names to these processes.

- Model strategies by thinking aloud or by asking students why you did something, when you yourself successfully employ a thinking skill.

- Encourage students to talk to themselves while they think. At early stages, it may be necessary for them to talk out loud; but eventually they should be able to talk silently to themselves about what they are doing.

- Help students over learn basic skills, so that they can afford the leisure to focus on how they are thinking rather than being overwhelmed by the basic skills included in the task at hand.

- Recognize the conditional nature of many thinking skills. Help students realize that what is important of using these skills is in knowing *when* (not just *how*) to use them.

- Encourage transfer, emphasize connections within and beyond the topic of a given lesson. Encourage the integration of knowledge acquired on different occasions.

- Provide feedback on the degree to which learners have evaluated their comprehension correctly, not just on the degree to which they have comprehended correctly.

- Emphasize not only knowledge about strategies, but also *why* these strategies are valuable and how to use them.

- Be aware that students may not transfer thinking strategies far from the original setting, unless they are guided to do so. The "Remember when.... Now let's rule" will help generalize these skills.

- Supply prompts to aid learners in monitoring the methods and depth at which they are processing information. These prompts can range from simple reminders or checklists to detailed scaffolded instruction programs.

- Avoid excessive dependence on external prompting. Although prompts may be necessary in early stages of the development of thinking skills, the ultimate goal is self-regulation.

- Focus on affective or personality aspects as well as the cognitive components of thinking skills.

- Be careful that attention to thinking skills does not detract from learning by competing for limited learning resources that need to be devoted to academic tasks

- Encourage students to work together on higher order activities, so that they can model thinking skills to one another and evaluate the comparative effectiveness of various thinking strategies.

4.8.2. CLASSROOM TECHNIQUES EMPLOYED TO DEVELOP THINKING SKILLS OF CHILDREN

Evidence suggests that brain gym type activities are a useful foundation for the development of thinking skills. Such activities can be used with children from the early years of schooling inwards. These activities encourage students to think in a diversity of ways.

Providing student with verbal tools necessary for the analysis of internalized mental processes is a way to improve thinking. From the early years of primary school, teachers can do much to encourage students to engage in a variety of talk based activities, that in then will help to develop their thinking skill.

As students become confident about expressing their opinion, teachers can use questioning techniques to foster thinking skills.

Thinking hats is a useful concept for a classroom as it will elicit varied responses about a topic.

A number of specific teaching techniques have been identified to help stimulate children's thinking in different subject areas. For eg; Odd One Out is a teaching technique to identify pupil's understanding of key concepts in different subjects. This strategy can reveal gaps in the knowledge that she has taught and the knowledge and vocabulary that the children are able to use. This approach encourages thinking and reasoning.

Concept mapping helps thinking visible and involves writing down. Drawing a central idea and thinking up new and related ideas.

Educational software can act like a teacher to prompt and direct enquiry through asking questions, giving clues and suggesting avenues of investigation. It can also act as a resource while learners discuss and explore ideas, prompting reflection around a simulation. Computers can help develop children's thinking skills when used as part of a larger dialogue about thinking and learning. The challenge for a teacher is to find ways to use the computer to encourage thinking with and discussion between children.

When pupils are taught the habit of effective thinking they grow in confidence, then learning is enriched and they are better prepared to face the challenges of the future.

4.9. LETS SUM UP

"The whole of Science is nothing more than a refinement of everyday thinking".   - **Albert Einstein**

The benefits of developing thinking ability are manifold. By developing one's thinking skills one can make achievements; can become successful; can shine in social life; can attain emotional, social, and economic maturity and so on. By developing one's thinking abilities it is possible to transform one's aggressive tendencies, bad temper and other negative tendencies creatively and constructively. It has been found by Dr. Edward de Bono that when school students were taught to think effectively, their ill-temper and aggressive tendencies reduced significantly. Clinical Psychologists have also found that when neurotics were taught to think effectively, they showed a remarkable reduction in their neurosis. Researchers have proved that thinking is a skill that can be enhanced by training and practice. Hence it is the responsibility of adults including teachers to nurture thinking skills in children through all possible means to create a better world with great thinkers.

4.10. ANSWERS TO CHECK YOUR PROGRESS

1. Knowledge, comprehension, and application are basic or lower order thinking skills while analysis, synthesis, and evaluation are higher order thinking skills.

2. Sensory motor stage, pre-operations stage, concrete operations stage and formal operations stage.

3. CoRT Thinking Tools are C&S: Consequence and Sequel, AGO: Aims, Goals, Objectives (purpose) OPV: Other People's Views APC: Alternatives, Possibilities, Choices, PMI: Plus, Minus, Interesting (ideas), FIP: First Important Priorities and CAF: Consider All Factors.

4. Blue coloured hat focuses on Process control, thinking about thinking (Meta cognition).

5. Preparation, Incubation, Illumination, Evaluation and Revision.

6. Defining the situation and the desired outcome, researching and identifying alternatives, comparing and contrasting alternatives and its consequences, choosing the alternative, designing and implementing the action plan and evaluating results.

4.11 ANSWER TO UNIT END EXERCISE

1. Brain storming technique to find uses of brick.

2. Your question paper should have questions to check lower order thinking skills like Knowledge, Comprehension, Application, as well as higher order thinking skills like Analysis, Synthesis and Evaluation.

3. Conduct a pre-test on a topic to class A and B and note the level of achievement of children. In class A, Use the technique of concept mapping/ mind mapping. No technique is employed in class B. After a specific period of time conduct a post-test on class A and B to note if there is any significant improvement in the children of both classes.

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4.13. UNIT END EXERCISES

1. Use any one of the creative thinking techniques to see the level of creativity of your class.

2. Prepare question paper on your subject based on Bloom's taxonomy and discuss it with your class.

3. Do a pre-test and then use a few strategies to stimulate thinking skills in classroom. After significant period of time conduct a post-test to see if there is any significant improvement in the level of achievement of children over a period of time as a result of their improvement in thinking.

> It is not enough for a teacher to just teach. A teacher is also a guide and a role model who is the right person to imbibe good values and true spirits in children. A teacher is very capable of bringing about transformation in children to make responsible citizens of them in the future. Empowerment of children is possible by teachers who are affectionate, loving and understanding and motivating to bring the best out of their students.

UNIT 5 DEVELOPMENT OF SELF

STRUCTURE

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5.0 INTRODUCTION

A baby when it is born is born without any experience. That is known to everyone. As the baby grows every day, she experiences new things. There are two types of growth-the physical growth and the psychological growth. The physical growth takes place as days pass by, such as the growth in height; weight, etc depending on the value of food, nutrients etc provided for the baby. Love, affection, discipline, etc helps in the psychological or the mental growth. These in turn influence the development of self concept. As a teacher you would have come across children with individual differences in their level of self concept. As teachers, you need to understand this and help the children improve their self concept. There are many factors that influence the growth of self concept in the child. In the chapter, we will study, the different factors that influence the development of the self concept in children.

5.1 LEARNING OBJECTIVES

After completing this unit, you should be able to

- Narrate how self concepts are formed

- Express the conditions that help in the development of self concepts

- Reveal factors affecting the development of self-concept

- Describe value and moral development in children

- Report the role and discipline in development of values

- Recount the development of attitude and role of teacher in development of good attitude in children

- Explain the importance of perception and its development in children

- Speak about the characteristics of motivation in children- intrinsic motivation, persistence, choice of challenge and dependency

- Demonstrate the methods to develop and enhance motivation.

5.2 DEVELOPMENT OF SELF CONCEPT IN CHILDREN

5.2.1 CONCEPTS AND HOW SELF CONCEPTS ARE FORMED

Concepts are regarded as the images in our mind; they serve to help children to understand the world into functional units. A concept is the basic unit of all types

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of learning. Human beings from infancy to old age learn new concepts and use old concept in new situations of their daily life. Individuals differ in their level of concept formation on the basis of their age, intelligence and experience. The process of concept formation emerges from a big, buzzing, blooming, confusion in which the child is born. The child is born with certain biological inheritance and experiences the external world through sense their organs, which are the gateways of knowledge. With any child some concepts may be fully and accurately developed, others only partially developed, and still others quite inaccurate. Because culture influences the development of certain abilities, cultural variations brings about individual differences. Early age is critical for the development of concepts for which a stimulating environment is essential. When the parents of children are illiterates, it is not possible for them to interact with the children in a way the children can understand because of their illiteracy. Hence, the home environment, school and neighborhood environment of the child also becomes very important from the developmental point of view. As children begin to understand the world around them, gradually they learn about different concepts. The many types of concepts that children learn are concepts of life, death, bodily functions, space, weight, numbers, time, sex roles, social awareness, beauty, self, etc.

The development of concepts depends on the stimulation and the opportunities that a child gets during early childhood. For example a child who has had the opportunity to travel to different countries in early life is able to understand that across the world exist people who have different languages and culture of their own. A child without this knowledge will have great difficulty in understanding this concept. Hence, not all children understand and develop all the concepts and also they vary in their level or degree of understanding different concepts. In other words, there are individual differences in the age at which different concepts form for different children as well as the degree with which they understand concepts. As they grow and attend school, many of these differences begin to reduce as they are subjected to similar learning situations.

Along with the physical growth, the development of personality also takes place. The foundation laid in babyhood begins to extend and grow as the child starts to interact with more people. Parents, siblings and other relatives first constitute the child's social world. How they feel about them and how they treat them are very important factors in shaping the self-concept- which is the core of personality patterns. As the child grows and meets more peer groups in the neighbourhood and in school, it begins to influence the development of the personality of the child. The attitude of these people, the way the child is treated by them then begins to have an effect on their self-concept. These may be in accordance to the early foundation from the home background, it can vary or in can be opposing to the early concepts that developed at home.

The early peer attitude and the attitudes of the important members of the family

are very important because, once the foundations for the self concept are laid; it is very unlikely to change. That apart, as the peer groups and family members get into the habit of thinking of young children in a certain way such as helpful, troublesome, naughty, mischievous, etc, they continue to have the same attitude and this chain of thinking will hardly change.

Because much of the early learning begin to a large extent, in the home environment, many conditions within the family become responsible for shaping the development of self concept during early childhood. The general relationship of young children with their family is very important. Most important in this aspect is the parent's attitude. How parents feel about the child's appearance, their abilities, their achievements etc. will have a great influence on how children feel about themselves.

The method used for child training at home is also very important in shaping the child's development of self concept. Strict authoritarian discipline and frequent punishing creates resentment against all persons in authority. The aspirations that parents have for their children are also very important and very influential in the development of the self concept. When the aspirations of the parents are unrealistically high, children feel doomed to failure. This lays a foundation for feelings of inferiority and inadequacy. They begin to feel that they are useless and good for nothing.

The ordinal position of children in a family also effects the development of personality. That is, whether the child is a first born, second born and so on, also influences the development of self concept. This position plays a significant role in specific situations that one is expected to play depending on position of birth. It is very evident that the child training methods used with different children varies according to the birth order. Another aspect that influences here is also the success and failures children have in competitions with their siblings.

In early childhood the children are not aware of factors such as caste, religion, race etc. However as they grow, this issue comes up somewhere in their lives. It becomes more prominent as children begin to interact with more and more people in a society. The interplay within different people depends on the background of the child and leads to experiences that are favourable or unfavourable. When it is favourable, it leads to positive self concept. When the peer group may neglect or reject them, it leads to negative self concept. From here the tendency of the child will be to look for comfort zones which will be available to the child only in a society of people belonging to the child's own community. At this point the feelings of discriminations may begin to develop. As a teacher you are expected to guide the child in the right direction using corrective strategies, so that such discriminating need does not arise in the child.

By the time the children grow into late childhood, they begin to learn about gender appropriateness. When they develop attitudes that are gender appropriate,

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they are liked by others and this gets associated with favourable personality characteristics. Boys begin to behave appropriately as boys and girls appropriately as girls. When they do not, it is considered as unfavourable. It is more so in cases with girls.

Environmental insecurity due to various factors such as death, separation, divorce, or social mobility affects self concepts of children unfavourably to a large extent. This is because they feel different from the peer group due to these factors. The upward or downward mobility of the parents both influence the development of self concepts in separate ways. Hence, providing a secure environment for a growing child is very important.

Development of favourable or unfavourableself concept depends on the life happenings during early childhood. Unfavourableself concept may develop when children feel that the parents have unrealistic aspirations from them, when the other peer member begin to socialize and one is still self bound, when social attitudes towards them are unfavourable, etc. Due to these factors, the attitude of the child regarding self also becomes unfavourable. Parents think that their children will outgrow this unfavourable self concept over time. However, the truth is the more the child grows, broader the unfavourable self concept becomes and these tend to be more persistent. Whatever causes these unfavourableself concepts, these develop very easily during childhood. Happiness is very important for the development of favourableself concept during childhood. As children spend much of their childhood at home, happiness depends on how the child is treated by the family members. It is said that the three "A" of happiness are Acceptance by others, Affection and Achievement. For happiness, some basic needs of the child have to be satisfied, which in turn will reflect in the formation of favourableself concept in the child.

5.2.2. FACTORS AFFECTING THE SELF CONCEPT

There are many factors that affect the development of self concept. They are the following:

1. **Physical condition:** Good health always facilitates proper and healthy growth. Poor health or physical defects cuts off children from their interaction with other peer members. The helplessness and weakness makes the child feel inferior.

2. **Body build:** When the children fail to grow to their normal size, they usually are unable to keep pace with the others of their age. Same with children who are overweight. The feelings of such differences with others of their peer group make them feel inferior.

3. **Names and nicknames:** Nick names start of for fun. However, sometimes they tend to persist and some children feel ridiculed by this. If the nickname suggests a physical or personality trait, it leads to feelings of inferiority.

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4. **School environment:** In most instances, teachers try to bring about good understandings with children. However, teachers who use discipline that children consider unfair will bring about feelings of disrespect for the teacher as well as the self.

5. **Social acceptance:** Being accepted or not by the peer group influences the personality of the child through its effects on self concept. Children who are very popular or children who are least popular, both are more effected by this than the others in between.

6. **Success or failures:** Children are expected to perform certain tasks for their age. These tasks are usually carried out by most others of their age. However, due to some reasons, some children may not be able to perform these tasks. Success brings about feelings of confidence and self acceptance. Failure brings about feelings of inadequacy. When success rate is high and prestigious, greater are its effects on self concept. Continuous failure on the other hand will have damaging effects on the child's personality.

7. **Gender:** In our country, girls soon get a feeling of inferiority by the roles they are forced to play. This results in decrease in self evaluation. More so as the society adds up to it. Hence, it is up to the teachers to make the children to understand that there is no such discrimination and that both, girls as well as boys are equal in all aspects.

8. **Intelligence:** If children's intelligence is deviant from the normal their personality is bound to be adversely affected by it. It will not be long before the children realize that they are less than the average and a feeling of inferiority begins to develop. Because of this they begin to feel shy and start to keep to themselves. It is also possible that they may become aggressive.

9. **Other factors:** Relationship with the family members, ordinal position, methods used for child training, the ethnic group to which one belongs, mobility environment etc, all play a significant role in influencing the concept formation.

A teacher in the class room has to be aware of the role of each of these factors and see how she can facilitate the development of good self concept in the children. In order to facilitate good health, she should impress upon the pupil the good practices such as hand washing, hygiene, combing hair, brushing teeth twice daily etc which bring about the required changes for health. They should monitor eating habits and rule out practices of children eating junk food. She should not allow the use of nick names, bring about good understanding and unity amongst the students, and bring about social acceptance within the class room and outside. When children fail in tests, the teacher should take individual interest and find out the reasons. In most instances, the causes of failure are because of lack of coordination at home to facilitate learning. When teacher is affectionate,

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understanding and loving half her job is done. For the remaining half she needs to put in some effort. In her efforts, she should balance the gender, with no discrimination to gender and try to reduce the show of high intelligence of others in the presence of the average and below average. When all are treated equally, the chances of the average and the below average picking up are very high. If they are discriminated and issues are made regarding their failures in the presence of other students, it may result in development of poor self esteem, which is not good.

Check Your Progress -1

1. Explain how self concepts are formed.

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2. What are the factors that influence self concept and how can the teacher facilitate improvement in development of self concept in children?

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5.3 DEVELOPMENT OF VALUES IN CHILDREN

A German Philosopher Friedrich Nietzsche first used the term 'Values' in 1880 to denote moral beliefs and attitudes that were personal and subjective. Each society is characterized by well defined, articulated values that are passed on to the members of the society. The values are what people consider important in life and what is good or worthwhile. They are acquired mostly by personal experiences in life. Value- systems usually vary from society to society. These values are made up of "do's" and "don'ts" or "right" and "wrongs." There are many categories of values. They are the following:

➢ Personal values

➢ Social values

➢ Moral values

➢ Spiritual values

➢ Cultural values

➢ Universal values.

Babies when they are born neither moral nor immoral. In other words they have no moral standards. Gradually as they grow they will learn from their parents, and later from their teachers and playmates and from the society to go by the codes of expectations. The foundation for moral development is laid during early babyhood and gradually it builds from there which guides their behaviours as they grow older. Nobody expects babies to behave by any standards. But a serious problem here is that the babies soon discover that they get more attention when they do things to annoy others.

Moral development in early childhood is on low level. That is because the intellectual development would not have reached the point where they can understand to apply abstract principles of rights and wrongs. They gradually begin to learn it from specific situations that they start to experience as they grow. When children are told to do something or not to do something their behavior will not be in accordance to doing right or wrong but more to do with their requirements at that moment. Children begin to understand the wrongs that they do by the punishments that they receive when they persistently keep repeating wrongs. Another way to understand this also a fact that children conform to social expectations in the hope of gaining rewards for their good act too. Hence reward and punishment are two factors from where the children begin to understand moral values.

Sometimes different people have different rules relating to the same behaviour. For example, a mother may punish when brother hits sister, which indicates this behavior is wrong. However, the father may laugh at the same incident which may in turn make the child to believe his act was funny and now the child is confused and the child gradually starts to bully the sister in the presence of the father and keep quiet in the presence of the mother.

Between the ages of five and twelve years, the rigid notion of right and wrong learnt from parents become modified and children start looking into specific circumstances surrounding a moral violation. Gradually as children grow, there is a shift. Children are influenced by the standards of the group with which older children are identified. The children main their gang standards until they cross puberty and gradually their standards build up to that of the adults after this.

5.3.1 ROLE OF DISCIPLINE IN THE DEVELOPMENT OF VALUES

The role of discipline is to teach children to behave in accordance to the expectations to their age. Throughout babyhood, babies begin to make correct specific responses to specific situations at home as well as in the neighbourhood. When strict discipline is followed, involving emphasis on punishment for wrongdoing even very young babies can be forced into a pattern of behavior. Punishment for wrong behavior and rewarding with approval and affection for

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appropriate behavior will begin the education of values and moral standards in babyhood.

Disciplining is the society's way of teaching children the moral behavior approved by the social group. Its goal is to let the children know what is right and what is disapproved and to motivate them to behave in accordance with these standards. During early childhood years emphasis should be on punishing only those wrong doing which have been done willfully, that is done knowing what is expected of them but they purposefully do it. In order to increase young children's motivation to learn to behave in a socially approved manner, rewards serve as reinforcing the motivations. For this three types of disciplines are used. They are the following

o   Authoritarian discipline: goes with the saying "to spare the rod means spoiling the child." Here, parents, caretakers, teachers etc. establish rules and tell the children that they are expected to adhere to it. No attempts are made to explain why these rules are made and why the children to adhere to them. If children fail to adhere to them, they are punished.

o   Permissive discipline: developed as a revolt against the authoritarian discipline many adults had been subjected to during their childhood. The philosophy here is that children would learn from the consequences of their acts how to behave in socially approved way. Consequently children were not taught rules, they were not punished for willful breaking of rules, nor were they rewarded for behaving in a socially approved way.

o   Democratic discipline: These primarily emphasize the rights of the child to know why rules are made and to have an opportunity to express their opinion. Children understand and abide by them. Here punishment is made to fit the crime, in the sense that the punishment is related to the misdeed. Similarly, rewards are given in the form of praise and social recognition.

Scientifically, it has been proved that different types of disciplining have different effect on children. There have been changes noticed in behavior, on attitudes and on personality.

Check your progress- 2

1.   Explain the different categories of values.

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2. Explain the role of discipline in the development of values.

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5.4 DEVELOPMENT OF ATTITUDE IN CHILDREN

5.4.1 MEANING OF ATTITUDE

Attitude makes considerable difference in the life of almost everybody and our success and failure depend on our attitudes towards our work and abilities. Attitude denotes adjustment of individuals towards some selected person, group or institution. In forming an attitude toward some aspect of the environment the individual shows readiness to respond. Thus the attitude results in a state of preparedness or a state of readiness to respond in a particular manner under particular circumstances. Freeman defined it as "a dispositional readiness to respond to certain situations, persons, objects or ideas in a consistent manner, which has been learnt and has become one's typical mode of response." Attitudes are not observable; they can only be inferred by the overt behaviour.

5.4.2 COMPONENT OF ATTITUDE

Components are reflected in behaviour. Behaviour has three components, that is the cognitive component or element that consists of knowledge and beliefs. 1. Our attitude depends on knowledge, which is logical and rational. 2. Second component of attitude is the feeling element. Attitude always arouses ones feelings and emotions. Emotions such as liking some people and hating some people are based on our feelings. Feelings that unite and integrate are termed positive and those that divide and disintegrate are termed negative. Knowledge and feelings urge an individual to act. 3. Behaviour or act is the third component of attitude. This enables others to infer the feelings and understanding of others.

5.4.3 DEVELOPMENT OF ATTITUDE IN CHILDREN

Attitude of children develop at home first and then from school and the peer group to which they belong. Personal experiences gained during the course of interaction with the society also helps in the development of attitude. As the children grow, need satisfaction and information exposure i.e., gaining knowledge about person or situation, depending upon which, favourable or unfavourable attitudes are formed. Attitudes formed on the basis of poor knowledge are most likely to change with the increase in knowledge about the issue. All are associated with number of groups. Children are also associated with groups such as a family group, the peer group, religious, ethnic, cultural and class groups. The primary

groups such as the family, friends and the peer group in the school have the ability to influence the development of attitudes. This happens because the primary groups expose the members to some source of information, and exerts greater pressure on its members to conform to the group norms. Because of this the members are likely to develop common attitudes about things and people. Once these attitudes are formed they become stable and resist any change.

5.4.4 ROLE OF TEACHER IN DEVELOPMENT OF GOOD ATTITUDE IN CHILDREN

The effective attitudes and actions employed by teachers ultimately can make a positive difference on the lives of their students. By examining prior educational experiences, teachers can discuss what they should or should not do with a class of students. The five frequently discussed attitudes and actions include: a genuine caring and kindness of the teacher, a willingness to share the responsibility involved in a classroom, a sincere sensitivity to the students' diversity, a motivation to provide meaningful learning experiences for all students, and an enthusiasm for stimulating the students' creativity.

The responsibility for preparing teachers is assumed to begin with teacher education programs at higher education institutions. However, by the time the undergraduate students enroll in an introduction to teaching course they have already experienced and survived many teachers. Since these students have achieved this wealth of educational opportunities; they can serve as credible resources in identifying the attitudes and actions that were implemented in prior classrooms by their effective teachers. Teachers have the opportunity to leave an indelible impression on their students' lives. School experiences mold, shape, and, can influence how children view themselves inside and outside of school. These school memories have the potential to last a lifetime in students' minds and can play a consequential role with present and future decisions. It does not take long for students to realize that teachers make the difference between a long and boring school year and an exciting and challenging year. The effective attitudes and actions employed by teachers ultimately can make a positive difference on the lives of their students. By examining past educational experiences, preserves teachers can discuss what they should or should not do with a class of students.

5.4.5 FIVE EFFECTIVE TEACHER ATTITUDE

First Attitude: Demonstrating Caring and Kindness

This is to do with the personality of the teachers. A good teacher is prepared to share emotions and feelings such as enthusiasm affection, patience, sadness, and disapproval etc with the students. That apart, she should also be willing to share the true interests of the students. She should care for the students. Communications should be clear between the teacher and the students.

Second Attitude: Sharing Responsibility

A teacher should not be rigid. As the teacher provides good scope for responsibility, the teacher should also provide opportunity for equal freedom. Teacher should not go totally by the rules. This flexibility and responsibility shared should bring about a positive environment for both, the teacher as well as the students to work in a close relationship.

Third Attitude: Sensitively Accepting Diversity

The teacher should practice empathy and importance of understanding the students. While dealing with students coming from different community, background, etc, she should identify sensitivity, acceptance and encouragement as critical. She should not make the good teacher will refrain from making judgment and analyzing students and understands them as they are. The teacher should bring out the best in their students and complement them individually in the presence of the others in the classroom. A teacher can maintain a record of her time spent with each child in listening and talking to them which had made them feel valued and important.

Fourth Attitude: Fostering Individualized Instruction

The teacher should provide every student opportunities that are meaningful to the students. The teachers should recollect their times while they were students which had helped them to be successful in their leaning and also the methods used by their teachers to appreciate such good results and make use of it now. They should also remember the attitude of their teachers which had made them not participate and keep away from practicing such attitudes. It is also important for the teachers to work on the strengths of the students and to ignore their weakness. The head teachers should encourage the other teachers to encourage positive self confidence and self esteem.

Fifth Attitude: Encouraging Creativity

This attitude stresses the importance of stimulating the students' creativity. Teacher should listen to the ideas and suggestions for lessons and activities. The effective teachers are open to students' ways of being imaginative and also utilized many approaches to learning. The students get appreciated and get personally motivated when teachers design lessons that considered their interests, skills, and needs. Elements of learning destruction included placing too much emphasis on grades or giving the one and only correct answer to questions. Consequently, the students become overly concerned about finding the correct answers or trying to read their teachers' mind to say what she wanted to hear. With little opportunity for creativity, the students become uninterested in the learning process. Competition creates a burden that interferes with learning since the students' only work for the grades and praise from their teachers. Some of their teachers used extrinsic motivators or token rewards and these methods reduced the students' desire to

learn and even lowered their achievement levels. Many teachers felt a more effective method involved building on the students' intrinsic motivation by providing a fun classroom environment.

Studies have described teaching as an intensely psychological process and believe a teacher's ability to maintain productive classroom environments, motivate students, and make decisions depends on her personal qualities and the ability to create personal relationships with her students. These effective attitudes and actions employed by teachers ultimately can make a positive difference on the lives of their students. It is known that attitudes have a profound impact on teacher practices and behaviors. Attitudes and beliefs are a subset of a group of constructs that name, define, and describe the structure and content of mental states that are thought to drive a person's actions. With effective attitudes, teachers and students can develop relationships of mutual respect and trust.

5.5 IMPORTANCE OF PERCEPTION AND ITS DEVELOPMENT IN CHILDREN

The word perception denotes the process of getting to know the environment by the use of the senses. The stimuli come from the objects around us in the environment, but the stimuli are not the objects. The stimuli and the objects are entirely different. For example when you see a river down there in a valley, what happens is obviously not the river coming shooting up to your eyes, but merely that the light reflected from the surface of the river strikes your eyes. The light shimmers and you that the surface of the river is being ruffled by the breeze. You hear a low hum growing louder and louder, you that an aeroplane is approaching. Now an aeroplane is not a hum anymore than a breeze is a shimmer or a river is a bright spot of light. The objective facts are somehow indicated to the observer by the stimuli he receives but they are very different from the stimulus.

The way in which we interpret the information gathered and processed by the senses. It has been explained that an individual senses the presence of stimuli, but perceives what it is. It is our perception of the world around us, which leads us to respond in many different ways, making perception a key factor in the way both children and adults behave.

5.5.1 DEVELOPMENT OF PERCEPTION IN THE CHILD

Without the ability to perceive, it is impossible for the developing child to have a real sense of who they are and how they fit into the world. An example of a critical period in terms of development of perception relating to a squint is age three. It has been identified that when a squint is repaired before the child reaches the age of three then the bi-ocular vision develops fine. However, if the child is over three, bi-ocular vision will never develop.

5.5.2 IMPORTANCE OF PERCEPTION IN A DEVELOPING CHILD

Perception has been recognized as highly important for a wide range of factors associated with child development. In addition, the ability to know where we are in time and space is essential for children to be able to reach out and pick things up. Further reasons why perception is important for the developing child include the following:

➢   Socialization

➢   Acquisition of knowledge

➢   Acquisition of language

➢   Emotional response

➢   Memory

➢   Self-preservation

➢   Hand-eye co-ordination

➢   Sense of self-awareness

5.5.3 KNOWLEDGE, MEMORY AND PERCEPTION

Without perceptual development, a child is unable to either acquire new knowledge or remember what has been learned. This is because perception is identified as necessary for the child to be able to store knowledge. Therefore, perceptual development is vital for the developing child to reach key developmental milestones and go on to succeed within education. Friendships require the ability to respond to another person, making perception key to establishing and maintaining relationships.

As highlighted above, perceptual development is absolutely crucial for the developing child's hand-eye co-ordination, to be able to socialize and acquire both knowledge and language. While perception affects how children respond to different situations and sensations, it is also vital for memory and self-awareness.

5.5.4 IMPORTANCE OF PLAYING IN DEVELOPMENT OF PERCEPTION

One of the most important issues is young children's development of perception is the scope for play. In a cross cultural study of play, studies found that play enhances children's learning and development. Parents' perceptions of importance of play are derived from and are determined by socio-cultural norms, such as whether play with children will be stimulated or neglected. Surprisingly, it may even be actively discouraged and not allowed by parents. Play is fun and for

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most young children, something that occurs naturally. Play should coincide with early childhood education as it is argued to be the most essential for children.

There is a long history of developmental theory and research concerning play. Psychoanalytical theorists use play for helping children deal with emotional problems (e.g. play therapy). Jean Piaget established the link between play and the growth of intelligence. He believed that play serves as a vehicle for learning. To Lev Vygotsky, a psychologist, play is one of the most important sources of development and learning for young children. He believes that during play, development occurs because play creates a zone of proximal development. According to Vygotsky's theory, playing with a more advanced partner such as an adult, parent or older child can enhance the child's skills and build more confidence to take part in higher quality play. For Vygotsky, play is beneficial for the development of language, memory, reasoning, higher level of thinking, and social skills.

The importance of play for child development is endless and enormous. We know that children's brain development is associated with all domains of child development and learning. A significant linkage between brain development and play during early years has been found, suggesting that high quality play quickly increases neuron connections at a significant rate. Ginsburg and the Committee on Communications and the Committee on Psychological Aspects of Child and Family Health, found that children can recreate and explore their world through play. They argued that "Play helps children develop new competencies that lead to enhanced confidence and the resiliency they will need to face future challenges." They also added that through play, especially through undirected play, in other words free play, children get opportunities to exercise socialization skills (i.e. group work, sharing, negotiation, conflict mitigation, and self-advocacy). According to them, if play is child-driven, other life skills of children will develop and become essential for their future (i.e. decision-making, to know one's own pace, to discover one's areas of interest).

It was found that there is a link between play and many foundational skills and complex cognitive activities that are significant for early childhood development and learning. They also found that these skills construct a strong foundation for children and help them learn effectively in school and beyond. Therefore, play is essential for child development and also for academic success.

Given the importance of children's development through parent's interaction and relationship-building with children through play, it is recommended that countries include play in their ECD policies. In order to formulate an appropriate policy, cultural-relevant research-based evidences are needed to formulate the policy and to prepare awareness-raising program for this issue.

⚒ **Check Your Progress-3**

1. What is the importance of perception in a Developing Child?

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2. Explain how play is important in development of perception.

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5.6 MOTIVATION

Young children learn from everything they do. They are naturally curious; they want to explore and discover. If their explorations bring pleasure or success, they will want to learn more. During these early years, children form attitudes about learning that will last a lifetime. Children who receive the right sort of support and encouragement during these years will be creative, adventurous learners throughout their lives. Children who do not receive this sort of support and interaction are likely to have a much different attitude about learning later in life. Many factors affect the development of children, both external and internal. One of the most influential internal factors is the child's motivation. This motivation can be in two forms: intrinsic or extrinsic motivation. It is widely agreed that intrinsic motivation is better for an educational setting.

5.6.1 CHARACTERISTICS OF MOTIVATION IN YOUNG CHILDREN

Children do many things simply because they want to do them. Selecting a toy or a shirt to wear is the result of "intrinsic motivation." The child makes her own choice and achieves satisfaction from both the act of choosing and from the opportunity to play with the toy or wear the shirt. Since the activity is generating the motivation, it is mostly self-sustaining for as long as the child wants to continue the activity. Children also engage in some activities because adults tell them to, or in an effort to please another party. These activities are "extrinsically motivated." When a child is extrinsically motivated, the reward comes from outside the child-it has to be provided by someone else, and has to be continually given for the child to remain motivated enough to continue the activity. It is more difficult for a child to sustain extrinsically motivated activity because of this reliance upon some outside force.

Since intrinsically motivated activity is more rewarding in and of itself, children learn more from this sort of activity, and they retain that learning better. Intrinsically motivated children are more involved in their own learning and development. In other words, a child is more likely to learn and retain information when he is intrinsically motivated - when he believes he is pleasing himself. Parents can build on this sense of confidence by guiding their child's play and activities while still giving the child a range of options. This unstructured play is an essential element of the child's motivation, learning, and development.

5.6.2 DEVELOPING MOTIVATION

A number of behavioral characteristics are indicators of high motivation. Here are some of the important factors and some ways to help a child develop these characteristics.

Persistence is the ability to stay with a task for a reasonably long period of time. While very young children cannot concentrate on one activity for an hour, there are still measurable differences in the length of time that young children will engage in an activity. A highly motivated child will stay involved for a long period of time, whereas an unmotivated child will give up very easily when not instantly successful. Children learn persistence when they are successful at a challenging task. The art in building persistence is in offering a task that is just challenging enough, but not overwhelming.

Choice of challenge is another characteristic of motivation. Children who experience success in meeting one challenge will become motivated, welcoming another. These motivated learners will choose an activity that is slightly difficult for them, but provides an appropriate challenge. When they successfully complete such a task, children gain a high level of satisfaction. Unmotivated children (those who have not experienced early success) will pick something that is very easy and ensures an instant success. With such easy success, children feel only a very low level of satisfaction, because they know that the task offered little challenge. The challenge for teachers is helping the child find an appropriate challenge while still allowing the choice to be the child's.

The amount of dependency on adults is another indicator of motivation. Children with strong intrinsic motivation do not need an adult constantly watching and helping with activities. Children who have a lower level of motivation or are extrinsically motivated need constant attention from adults and cannot function independently. Since independence is an important aspect of quality learning, this dependence on adults will greatly limit children's ability to succeed in school. Parents can increase the likelihood of their child's building independent motivation by providing toys and activities that play to the child's natural creativity and curiosity. Often, these are the simplest, most basic playthings: blocks, little plastic "people," a toy car or two, and crayons and paper. These things encourage children to invent their own worlds rather than depending on an adult to entertain them.

The last indicator of motivational level is emotion. Children who are clearly motivated will have a positive display of emotion. They are satisfied with their work and show more enjoyment in the activity. Children without appropriate motivation will appear quiet, sullen and bored. They will not take any apparent pleasure in their activity and will often complain. As a teacher, you are probably the best judge of a child's moods.

5.6.3 ENHANCING MOTIVATION

For teachers teaching young children, the goal should be to appropriately support the development of motivation so that there is a proper foundation for optimal educational growth. Teachers should be very cautious about the use of many extrinsic rewards, as this can severely interfere with the child's motivational development. Praise for an accomplishment is appropriate, but be sure that your child is doing a task because she is interested, not because she thinks it will bring praise from you.

Difficulties arise when adults or others within the child's environment enforce external standards and replace the internal reward system with one that depends upon outside forces to supply all of the rewards (candy, money, excessive praise). Children then begin to feel successful only if someone else rewards them for accomplishments. They lose their intrinsic motivation and may only feel success when someone else judges them as successful. In such situations, children may not develop feelings of self-worth, and will judge their own value by someone else's standards. Your child should never need to ask, "Did I do well?" She should know and be confident in her own successes.

There are several strategies teachers can use to help children remain more fully intrinsically motivated.

Provide an environment (through age appropriate toys, activities, etc.) that allows children to freely explore and to see the effect of their actions (i.e., toys that have visible or tangible changes when moved).

Allow children ample time when working to allow for persistence. When children are deeply involved with an activity, make sure that they can finish without interruption. Resist the natural urge to "help," Respond to children's needs in a consistent, predictable manner, but allow them to be as independent as possible. All children need clearly defined limits. Playtime, however, need not be structured and organized. Provide many opportunities for children and adults to explore together and interact directly. It is important for both children and adults to be working together on an activity. This lets you observe, model, and encourage the child. Provide situations that give children an acceptable challenge. Activities those are slightly difficult for the child will be more motivating and provide for stronger feelings of success when accomplished. This may take some trial and error at first. Give children opportunities to evaluate their own accomplishments.

Rather than stating that you think they have done a good job, ask them what they think of their work. You'll never go wrong by asking the question, "What do YOU think?"

Do not use excessive rewards. They tend to undermine children's ability to value themselves. Praise and rewards should be based upon children's effort and persistence, rather than on the actual accomplishment.

The world through a child's eye is an awesome place. Allow children to explore and discover their world. Around every corner is an experience just waiting to surprise and excite young growing minds; all they need is a small amount of direction and a large amount of freedom. It is not necessary to praise and reward children for their own actions as they attempt to control their environment. The feelings of accomplishment they gain from results of those actions will be reward enough. Providing excessive praise and rewards is unnecessary and can actually be harmful to children's motivation and desire to learn. Remember, the habits and attitudes toward learning that are formed in these early years set the mood for all future learning.

Check Your Progress-4

1. What are the characteristics in young children?

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2. How to enhance motivation in children?

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5.7 LET US SUM UP

In this unit we have studied, what is concept formation, how the understanding of the self concept develops from understanding different concepts. We also learnt the factors that help in the formation of concepts and the factors affecting the development of self concept. As teachers, it is very essential to understand the process of the development of self concept in order to facilitate the progress of proper growth of self concept. In facilitating proper psychological growth of children, we need to facilitate proper development of values, perception and motivation. To ensure this we need to understand what each of these are and how

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it can be facilitated. Proper use of disciplining by the teacher will bring about the appropriate development of values in students. Like moral development the growth of attitude also first starts as the baby begins to learn other things. Attitudes develop at home in the homely environment first due to interaction with members of the family and close friends. Later interaction with peer groups and members of the society influences favourable and unfavourable attitudes through satisfying the needs of the child and sources of information. Teachers need to be risk takers by being themselves and by trusting their students. They also need to create independent individuals so learning is more likely to take place. Effective teachers genuinely care, like, accept, and value their students. These teachers will demonstrate kindness, share responsibility, accept diversity, foster individual instruction, and encourage creativity. With the knowledge of these five attitudes and actions, they will have the potential to be an effective teacher who will be remembered fondly by former students. Knowledge, memory and playing are very essential for the development of the different types of perceptions. Jean Piaget and Vyogotsky have had a lot to say about the importance of play in the development of intelligence and perception. Teachers also need to understand that children can understand better in a classroom if she adopts methods that use playing for teaching. If a teacher makes up her mind, she can as well understand how using play, she can teach the different concepts and subjects in a classroom situation. It is also very important for the teachers to emphasize the parents to allow some time for children to play regularly, in order for them to learn and for their perception to improve. It is not only playing that is important in learning, motivating to learn also is very important. When children want to do something it is easy to teach. When children are asked to do something by others and they are not interested in doing it, is difficult to learn as well as to motivate them to learn. Teachers should be very cautious about the use of many extrinsic rewards, as this can severely interfere with the child's motivational development. Praise for an accomplishment is appropriate, but be sure that the child is doing a task because she is interested, not because she thinks it will bring praise from the teacher.

5.8 ANSWERS TO CHECK YOUR PROGRESS

1. Explain the factors affecting the development of self concept in children. How as a teacher would you guide the child in the class room to develop proper self concept?

2. What would be the role of teacher in guiding the students to develop good attitudes?

3. In order to enhance the motivation of the children, what strategies can the teacher adopt in the class room situation?

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5.9 SUGGESTED READING& REFERENCES

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5.10 UNIT-END EXERCISE

1. Carry out a simple exercise in the classroom. Divide the class into small homogenous groups and give them some tasks. Use different pretentious attitudes and observe which group performs best based on your type of attitude.

2. Teach the students to use their understanding of values to the optimum level and observe the level of usage.

3. Use different standardized tests to measure the level of attitudes children have.

UNIT 6 DEVELOPING CREATIVITY IN CHILDREN

Structure

6.0 INTRODUCTION

In the previous unit you studied about 'Self, its meaning and importance .In this unit you will come to know about creativity, its nature and how it can be developed in children. It is very much a part of 'self". You might have heard and used the term 'Creativity' on many occasions.

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Creativity is found in all children but in different forms and degree. Children are found to express themselves in many different ways: give novel responses, suggest unusual uses for the equipment etc. Therefore it becomes important to identify such children and help them develop the same and contribute to the progress of the society.

The development of any society is dependent on the creativity of its people most of the inventions and discoveries came into existence because of the creativity of its people. What facilities are given by a society to develop creativity of its children depends upon the history and ethos of that society. Creativity of scientist, poets and others are all well known. You will learn more in this unit about creativity and how to foster creativity in children.

6.1 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Recognize the characteristics of creative people

- Identify the different types of creativity in students

- Differentiate between more creative person and less creative person

- Identify the factors influencing creativity out of a given set of ideas

- List the activities to develop creativity

- Develop skills in conducting activities to foster the creativity of students

- Develop activities to promote creativity among the students.

6.2 CONCEPT AND NATURE OF CREATIVITY

You may have seen children using funny words, crazy formations and uncommon ideas for known things or words. Recall the example of a student using 'pomato' for a combination of words Potato and Tomato.Also consider the following:

A dramatist from South India, as a small boy held the dog upside down and asked his father to prostrate before it. When his father became angry and asked as to why the boy is doing like this the boy said, " Yesterday you only taught me that when a dog is reversed it becomes God". His father had a hearty laugh.

Such creative children tend to be more observant, reserved,fun loving and not afraid of speaking out something funny or crazy. Most of the children are born creative but they tend to lose it as they grow up. According to Davis, 90% of the five year old children are high creative's and only 2% of the 25 years old people are high creative's. Age seems to be influencing creativity negatively. The adult who had enjoyed the mischief of small children and funny words of youngsters

would expect decent behavior from adolescent children they simply become more evaluative than enjoying the ideas.

Creativity is an ability to be innovative, unusual, to be different from others or equals. It is an ability to give novel responses, new answers and establish new relationships. The child may combine two or more unrelated words or ideas and give a new answer. The use of gadgets in novel ways is another way children express themselves. You may recall the funny answer given by your student in the class for example, when a teacher asked for the third eye and where it should be, a student said it should be in the tip of his forefinger. Similarly, when students were asked to think of a new machine, a girl said she wants a plant making machine. You may have seen many such instances in your class and neighbourhood.

Psychologists have found these children to be non-normal, not adhering to the norms and traditions and sometimes daring to express the unusual ideas, which have not been thought of by others or equals. Creativity is sometimes thought to be a problem solving ability characterized by originality. When a truck loaded with materials had struck under an over bridge and people were struggling to take it out, it was a young boy who suggested deflating the tyres to some extent.

Creativity has humor as an important part in it. If you cut the joke for the first time or if you use an idea in an altogether new situation it shows your creativity. If you copy it from a magazine or internet and say it, it does not show your creativity. People may laugh and thank you for it. The HyKu poems or limericks are an excellent example of creativity of a person. Copying from a book or copying ideas of others is opposite of creativity. Imitation is against creativity. A class is always creative as many minds are tackling a problem. Someone will be daring to be different when all others are satisfied to be submissive. When Gauss was asked to find the sum of 1 to 100, the teacher thought he would take lot of time, but Gauss the young boy stood up after sometime with the answer. The teacher was surprised. The answer was like this. Keep out 50 and 100 separately, 1&99 becomes 100, 2&98 becomes 100 like this he found the pairs of numbers which makes 100 and multiplied no. of such pains with 100 and then added 50& 100 to obtained product to find sum of 1 to 100.

Types of creativity

In general, creativity is of two types: (a) Verbal creativity, and (b) Non- verbal creativity. Writing poems, stories, novels,etc come under verbal creativity. Even cutting jokes and writing HyKupoems are of this type. Painting, sketching sculpture work , caricature, collage, rangoli can be expressions of creativity. Creating animal forms out of vegetables, using a gadget in an altogether different place come under non-verbal category.

Verbal creativity- Expressing ideas, thoughts in spoken languages, in different

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languages & in different intonation, singing, composing music, playing instruments, narrating stories in different form, advertising film, documentary, can be put in verbal creativity category while expressing ideas, thoughts in 2 & 3 dimensional form like, sculpture, painting, gardening, Bonsai, Neck Chand's rock garden, abstract sculpture, statue, drama, dance, monologue, folk dance, folk lore, architectural activity like   Effil Tower, KutubMinar, TajMahal, Lotus Temple. Various types of designing like fashion and furniture, car, machinery, computer, mobile etc. can be put in non-verbal category.

Check Your Progress 1

1. Venlak as a combined name of Venkateswara and Lakshmi is an example of(/ only one of the following) :

    a)   Verbal creativity,   b)   Non- verbal creativity ,

    c)   Theoretical creativity,   d)   Practical creativity

2. The opposite of creativity is (one of the following):

    a)   Recalling ,   b)   Recognising,

    c)   Repetition,   d)   Imitation

3   Which of these is highly connected to creativity? (One of the following):

    a)   Submissiveness,   b)   Talkativeness,

    c)   Originality,   d)   Impulsiveness

6.3 STEPS IN CREATIVE THINKING

Creativity is not an inborn ability. All creative products have seen the light of the day, because people have thought systematically and worked on them. They might have had sudden flashes, of which they were not sure. There might have been some steps in their creative thinking. An example of Archimedes would be of help here. The solving of crossword puzzles are very much similar to these steps. Most of us have heard aboutArchimedes's crying out Eureka, Eureka and running out in the streets of Athenes.

The steps involved in the creative thinking are the following:

(a)   Preparation: Creative people utilize his all acquired knowledge to solve a problem in innovative manner or to create same never before seen or known. Objects, things, or convert his ideas, thoughts another into concrete, visible from successfully.This can be achieved only through prior preparation or through clear cut mental vision.

(b)   Concentrated attention: Concentrated mind put in energy in a particular

task or events either to achieve predetermined goal or undetermined goal i.e. focused mind more from known to unknown zone.

(c) Withdrawal from the problem (Incubation) : Archimedes withdrew from the problem and wanted to take bath. Even though consciously he wanted to do another activity unconsciously he was still thinking of the problem that the King had given.

(d) Flash: Archimedes found the answer to the problem, suddenly, when he saw the water spilling out from the bath tub. Then he shouted 'Eureka' and ran in the streets of Athens.

(e) Verification: Most of us do not know that the same person came back to his laboratory, struggled with different cubes and found the Archimedes principle. He must have toiled in the laboratory for hours or months together to find the principle.

Great Scientists, Mathematicians, poets have all retained their creative spark in spite of the uncooperative environment. They must be congratulated for their ability to fight against the rigid social control mechanisms. Let us consider a few examples of these creative's, who stood against all suppressing mechanisms and showed their creativity.

Edison was dismissed from the school Einstein was lagging behind in Science and Mathematics; Keats, Shelley, Edgar Rice Burroughs were committing spelling mistakes; James Watt was called "Lazy Bugger". But these people have made our life livable. Thank those people in your heart silently, who have struggled against the society or system, like Marie Curie, Henry Cavendish, Rabindranath Tagore and many more.

6.3.1 FACTORS AFFECTING CREATIVITY

Normally all students of education think of 'Heredity' and 'Environment' to understand the nature of creativity. It is the environment which plays a major role compared to heredity. Most of the children are born creative, but they gradually lose their create potential, as they grow up. It is the environment which comprises of parents, teachers, the text books, the examinations, the school climate, and which influences creativity negatively rather than positively. This happen due to conditioning of mind in rigid and sensitive manner.

Four important factors have been identified by psychologists that influence creativity. They are called 4 P's

a. Creative product approach.

b. Creative process approach

c. Creative person approach

d. Creative situational approach or press.

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Let us examine each of these four factors.

a) The creative products are easily available for evaluation and are physically seen or heard. To find out which one is more creative requires good evaluation criteria. Originality of a creative product is to be assessed from two points of view:one from the point of view of person and another from the point of view of society or both. These can be evaluated but it has to be time specific. The radio which had lot of importance at that time does not have it today. Tape recorder was a very original idea when it was invented, but today it is not. Originality also is time specific. What is original today need not be original tomorrow or next year or after a decade, because every idea thought have certain life span.

b) The creative process is how the people think. The steps of creative thinking have been mentioned earlier, but time cannot be fixed for a student. "A" will have flash now," B" may have flashed tomorrow. The preparation of each student differs from the other, as he/she might have read epics, novels, short stories etc.

The ability to think fluently, flexibly, originally differs from one student to the other. Even fluency can be divided into verbal fluency, associational fluency etc. Flexibility is another dimension in which students differ a lot. Research studies in the field of creativity have lead to the differentiation between convergent thinking and divergent thinking. Simulation has been used for seeking insight into the way people think creatively.

c) The creative person approach implies how the person is,? who is creative,? what are the personality characteristics that have helped him/her in being creative, etc?. The creativity intelligence distinction has been one of the factors that have been worked on. There is low co- efficient of correlation between the two, in case of normal people. It is around +0.36, which means it is low but positive correlation. In case of students whose IQ is above 120, the co-efficient of correlation is zero. The implication is that to be creative, you require some amount of intelligence, but high intelligence does not necessarily guarantee high creativity.

The personality tests have revealed that creative men tend to be sensitive to the situation which is a feminine characteristic. Similarly creative women tend to take more risks, which is a masculine characteristic? Creative Men seem to be more feminine and Creative Women seem to be more masculine in nature.

Other characteristics common to many creative's are: they are dominant, self-confident, out spoken, sharp witted, demanding, aggressive, self centered, persuasive, verbally fluent, relatively free in expressing worries and complaints.

They are also independent and free from conventional restraints and

inhibitions; steady in their intellectual efforts, psychologically minded, more flexible etc. All people who have these personality characteristics may not be creative, but some are good in producing ideas, products as compared to others.

d) The creative situation approach is another way creative's have been influenced. Some common factors which have emerged are remembered unhappiness in childhood, an extra ordinary respect by the parent for the child, early sanction to explore the ideas and universe to make decisions, lack of closeness between parents and the child, emphasis on developing individual code of conduct, experience of frequently moving from place to place or culture to culture or country to country,which developed more independence, some sort of shyness, isolation and solitariness in childhood and adolescence, absence of pressures to establish prematurely his professional identity, etc.

The expressions of individuals who are creative differ from person to person, i.e. it is highly individualistic. The way in which the creative person expresses is difficult to predict, as his/her creative ability coupled with temperament, moods and values and more than these "inspiration" takes a peculiar form of its own. You cannot expect a creative person having unhappy childhood, developing good personality characteristics, producing a creative product, is a wonderful situation which cannot be imagined to be true or to occur.

Check Your Progress 2

1. The approaches to study creativity are mnemonically called as …………..

   a. 4 P Approach   b. 4 B Approach

   c. 4 A Approach   d. 4 C Approach

2. The steps of creative thinking are ……………..

   a. 4   b. 5   c 3   d. 2

3. Convergent thinking is best expressed in this example ………………..

   a. School   b. Essay

   c   Homework   d. Theorem

4. If the parents get transferred every 3 years and the student moves with the parents, it is beneficial to the student from the point of view of ………………

   A. Intelligence   B. Reflective thinking C. Creativity D. Logical Thinking

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6.4 STRATEGIES FOR DEVELOPING CREATIVITY THROUGH CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

The activities which are tried out in the classrooms in the context of academic areas can be called 'scholastic' activities. Generally, these are done as part of curricular subjects such as science, mathematics, social science etc. 'Co-scholastic' are the ones which are teacher posed, but done outside the curricular activities such as sports, games, debate, club activities like music, etc.A large number of activities could be done as parts of curricular and also co- curricular activities. The brain storming can be scholastic, if the teacher wants to do as part of teaching a particular subject. An activity can either be scholastic or co-scholastic, depending on where and how the teacher does the activity.

Activities to develop creativity are many in number. An estimate in 1980 was that there were more than 700 techniques to develop creativity. These can be divided into two types: a) Techniques, and b) Instructional materials. Techniques are more people- specific and differ from person to person. Instructional materials could be got xeroxed and researchers can read the manual and administer the materials on groups of students. Let us take two examples for both of them each.

6.4.1 BRAIN STORMING

This technique was developed by Alex Osborn. As a psychologist, he had studied the way people think. Most of us evaluate our thinking immediately much before the idea is born. We abort them, thinking about what would others say on this point, may be your mother, father, brothers, sisters, colleagues or the boss, etc. Hence, Osborn divided the thinking into two stages : a) Ideation stage and b) Evaluation stage. In the Ideation stage, he has given four principles.

1. Free whelming is emphasized. Whether the idea is crazy, funny or costly express it.

2. Criticism is avoided. Self criticism or of others is not permitted.

3. Quality breeds quality. More the number of ideas, the chances of better ideas are there.Hence, larger number of ideas are welcome.

4. Hitchhiking is allowed. That means you can combine your ideas with that of others.

American psychologists have used Green light stage for ideation and Red light stage for evaluation stages. Students or people of various backgrounds, say 6-8 of them are made to sit in a circle and they are made to express ideas freely, and openly, without fear of anybody or authority. These ideas are immediately recorded by a stenographer or tape recorded, without the knowledge of the participants.

In the evaluation stage, many officers and a few of the participants will sit and consider all the recorded ideas from the point of view of implementation. Many of the ideas will be novel, which the officers of that department will have never even thought of.

6.4.2 ATTRIBUTE LISTING AND CHANGING

Creative thinking is a systematic thinking, and ideas have not fallen from heaven. Hence, attribute listing and changing is done systematically. Each object has its attributes and attribute means quality or characteristic or characteristic quality. We may take a calendar and ask the students to list its attributes. Attributes of a calendar can be ,its design,its colour combination in various form,facts used in artistic and aesthetic manner to represent number and name of months,theme based pictures printed on each page i.e. wildlife, nature, festivals, children etc., its shape calendar can be designed in circular, square, rectangular or in other shapes in innovative manner.

If we keep innovation and creativity in mind while designing a calendar than a number of beautiful, attractive interesting alternatives can be developed to depict the layoutof pages of a calendar. Try to design a handmade calendar for yourself. Use your creative potential and imagination to design a calendar in your own way.

6.4.3   INSTRUCTIONAL MATERIALS TO FOSTER CREATIVITY

Many researchers and creativity psychologists have developed a number of instructional materials. Covington, Crutch field, Torrance, Cropley and many others have worked in this field. Let us consider them in groups, so that they can be used together. In India Nirpharake, Deshmukh, SubramaniaPillai, Bhaskara, Jerial and others have worked to foster the creative thinking abilities of students.

a.   Puzzle solving: Edison according to his son Charles was very fond of solving puzzles. He used to keep himself creatively open to many problems and ideas. Most of the puzzles have a clue. Identifying the clue and solving it will help you in solving the puzzle. Otherwise, you keep thinking in old formal ways and will never be able to solve it. Peter Pauper and others have written books on puzzles. "Amar Leelavathi" by Bhaskaracharya is a collection of a number of puzzles in Indian situation. You may recall Isac Asimov's page in "Illustrated weekly of India" here.

b.   Riddle solving: Alexander, the great, invited Indian Rishie to the contest of riddle construction and riddle solving. Indian culture from times immemorial has had riddles in their literature. Grannies used to ask their grand children to solve the riddles. All the states of India have riddles in their languages. Riddle solving and riddle construction are similar to two principles of

"Synectic", a creativity fostering techniques developed abroad. They are 'making the strange familiar' and 'making the familiar strange'. Most of the riddles have been developed using analogies, may be direct, simple, symbolic or fantasy.

c.   Divergent thinking questions: These questions ask for more than one responses. Children will give a variety of responses and they are all relevant. In the examination system of today, we insist on single answer, that too teacher dictated only.

d.   Mystery plots: These are situations, where the children are accosted with a plot a theft or a murder and the children have to think like a detective. Children take to it so well that they enjoy solving such mystery plots.

e.   Consequences situations: Children are given impossible situations and when such a thing happens what would be the consequences. Students enjoy variety of consequences for these just suppose situations some of them work out long and farfetched consequences that even the adults would be astonished

f.   Story writing: These are of creative expression type where children write novel tittles for the given stories. Complete the lead to finish the story, complete the half finished story, and write a full story for a given title.

g.   Poem writing: This is again of creative expression type, where children write the unusual titles for the given poem, complete the half finished poem, and write a full poem for the given title

h.   Riddle construction: Children enjoy doing this activity of creativity expression type, where they complete the half finished riddle, and write a full riddle for a given title or object or name

6.4.4 SOME MORE IDEAS

Given below are more ideas on developing creative thinking which have been tried by different authors.

a.   Sometimes 3 or 4 letters are given and each student is asked to complete them by developing a word for each letter, so that a meaningful sentence emerges.

b.   Students are given tittles like equality, democracy, non-violence and they are asked to develop their paintings or pictures out of them.

c.   Each culture has fairy tales which develop imaginations. Sanskrit, Hindi, English and other languages have many such fairy tales, and even the science fictions are of much importance here. Jules verne, Aldoes Huxley are some of the persons who developed science fictions.

d.   Idea Trap Mechanism:- All of us know that there is waking stage and sleeping stage. The in-between stage is fertile for creative thinking. Students are

requested to keep a small book and a pencil, by the side of their bed. When they are half sleep, they get wonderful ideas, which they can write go to sleep. They can look into the book after 2 or 3 days and develop those ideas further.

6.4.5 QUESTIONING

Teachers and researchers have developed a number of types of questions, which can be used to foster the creativity.

1. Redefining Questions: In this type of question, children are asked to redefine an object, animal, person or event. These questions develop a new perspective and children learn to be aware of unusual characteristics and look beyond the obvious.

    a. Why is a fountain pen like a tap.

    b. How is a clock different from a calendar.

    c. How are face and TV similar.

2. Consequences questions: These questions pose situations or events that might not have happened or will never happen. Such questions make the children to imagine and write the consequences, if such an event takes place.

    a. Suppose the petrol supply on earth vanishes all of a sudden.

    b. If it is against the law to size.

    c. Just suppose all people in the world become mad.

3. Hypothetical questions:- In this type of questions students have to go beyond the available data (their learning) and synthesise them with their personality characteristics.

    a. If you were the manager of a bank?

    b. If you become an ant suddenly?

4. Provocative questions: The children may be taught a passage or they may be asked to go through a passage and proactive question may be put. They help the children to imagine and go beyond the information provided in the passage.

    a. What would have Gandhiji done had he lived today?

    b. Do you think lord Krishna would be the right type of leader today?

5. Questions seeking new relationships: Sometime theses questions look to be funny or crazy and may lead on to frustration on the part of the students, but they will enjoy later.

    a.   Is month a mile?

b.   Is day a week?

6.   Divergent questions: These questions require the students to break from the fixed pattern of one question one answer and develop many relevant responses. The cost or time need not be an inhibiting factor in such relevant responses.

    a.   A town hidden beneath the mud has been found. What might have been the reasons as to why the town might have gone underground?

    b.   A tank is full of crocodiles. A pole is standing in the middle of the tank you have been given a rope and your job is to put a knot to the pole at the centre.

7.   Challenging assumptions questions: These questions help children develop a functional understanding of the world. The assumptions are being questioned which have been accepted from a long time. These exercise the mind and children develop a new perspective.

    a.   Why questions like why should be respecting our parents?

    b.   Challenging slogans, brand names labels, etc.?

8.   Future problem solving questions:- These questions require the students to design and redesign which involve good deal of innovation. They make the students look differently at things and make them think in different ways.

    a.   A machine to dig the tunnel without disturbing the traffic on the road.

    b.   An apple picking machine.

    c.   A better umbrella.

    d.   A new milk bottle.

When we pose such questions, there will be disorder and the teacher will have to tolerate it. He has to ask children to write it out. If told by one student, the others may stop thinking. The process would be as follows:

    a.   Writing stage.

    b.   Clustering stage (Responses are written on the board)

    c.   Recombination stage (children are asked to think and recombine the ideas – the hitchhiking of Brain Storming.)

6.4.6 SOME MORE ACTIVITIES

Following activities have been takenfrom various sourcesand these can be used to foster creativity among children. They are the following:

1.   Sensitivity Training:

a) What forms do you see in clouds

b) What sounds do you hear in this building?

c) By touching you have to tell the names of the pulses.

d) When you go on the field visit, list the smells you have come across, etc.

2. Observation: Making children observe a pen or a handkerchief and list the observation.

Dr. Seeberg has listed 52 observations of a candle and a burning candle.

3. Classification: Children can be asked to classify numbers from 1 to 100, or asking students to classify themselves.

4. Alliteration:Children can be asked to list the words with the same letter and make sentences out of them. Ex:- Central, College, Coffee, Club.

5 Multiple uses: Children may be asked to list the usual and unusual uses of newspaper, empty refill, etc.

6. Imaginary story telling: Like Ganesha, sphinx, etc. children may be asked to imagine a man animal bird combination, develop its picture and write a story as to how it came into existence.

7. Invention: Children can be asked to think of a new dish, and asked to list the materials required, process of preparation, and approximately tell the taste, as well as the new name for it.

8. Listing as many uses as possible for a familiar object such as a brick, a tin can a screw driver, a cluster, a needle, etc.

9. Asking children to list words they associate with each topic heading like size, color, feeling, etc., as many words as possible.

10. Asking students to think of as many analogies associated with colors in nature and foods. Ex: Grass is to lettuce as snow is to milk.

11. Asking students to suggest as many synonyms as possible for a given word and then asking them for antonyms.

12. Asking students to add a few screws and wooden pieces to McKenna's set and developing many shapes and forms.

13. Asking students to cut cubes and half cubes from a wooden piece plank and to make many shapes by joining them.

14. Asking students to work on Tangram or seven piece puzzle to develop as many shapes as possible by rearranging the pieces.

15. Asking the students to draw lines in many ways to develop new figures for the given unstructured stimulus like

6. > O } X etc

16. Asking the students to solve the crossword puzzles which appear in magazines and newspapers.

17. Asking students to combine words and ideas from far off or remotely associated fields. Exa: Combining words to arrive at new names from list of goods and animals

18. Asking students to fix a word and start adding letters A to Z as prefix to arrive at a new brand name.

19. Asking students to combine parts of the two names to arrive at new names

    Exa: i) Potato and Tomato – Pomato

          ii) Sandalwood and Turmeric – Santur

          iii) Sanjana and Shodana – Sanshow.

20. Asking students design new machines

    Exa : i) Cards distributing machine.

          ii) Plant putting machine.

21. Asking students to redesign the old gadgets or materials.

    Exa: i) Duster

          ii) Pen

22. Asking students to find out from the surroundings the labels, brand names, etc. which have been accepted and followed without questioning them

    Ex: i) Public career on the trucks.

         ii) Sound horn on the back of the buses etc.

6.5 DEVELOPING LEARNING MATERIALS TO FOSTER CREATIVITY

When the teacher is interested in fostering creativity, he/she has to have lot of patience, open mindedness, etc. and has to control his/her irritation, anger, frustration etc. At times ,he/she may have to act along with the students, as though he is also puzzled. The children must be given enough freedom to think, sit in anyway they like, in other words he/she should learn to tolerate disorder in the classroom. Torrance and Myers have given a few principles for the teachers who wish foster creativity in children

a. Be respectful of children's ideas.

b. Be respectful of imaginative and unusual ideas.

c. Show to the pupils that their ideas have value

d.   Encourage and evaluate the self initiated learning.

e.   Tie in evaluation with causes and consequences.

These principles are valid even for the development of learning materials by the teachers or members of non-governmental organizations. The activities they develop or the instructional materials must have the following characteristics:

a.   The activities must lead to a number of possible responses.

b.   The activities must be open ended.

c.   The activities may have a catch in them, so that it helps the students in flexible thinking.

d.   The activities can be for developing the individual abilities, like fluency, flexibility, originality, inquisitiveness, persistency, elaboration and sensitivity to problems, etc.

e.   The activities may not be immediately implementable but still, they are of value to us in the classroom.

f.   You can collect a number of puzzles, riddles, mystery plots and divergent thinking questions and keep them ready to use in the class.

g.   The activities must develop imagination and they must not insist on a stereotyped behavior.

h.   The activities may be from the models developed by creativity researchers.

i.   The activities may be extension of the lesson in the text and hence become topical in nature.

j.   Imaginary stories must be told in the classroom by teacher to enable the students to have the potential to become a leader today.

k.   Any activity can become creativity fostering activity, provided the teacher looks at it from a different aspects.

l.   Simple activities may be converted into creativity fostering type depending upon addition of a new dimensions or deletion of a few parts.

m.   Collect anecdotes from your culture or stories, which have a tinge of inspiration or creativity in them.

n.   The story books from epics and great literature of the culture can be collected and stored.

Edward de Bono's work on lateral thinking is of value here. His hypotheses are that we do not teach our children to think. It is more so in Indian situation as we insist on rote learning in order to pass examinations and tests. The classes have become lesson hearing rooms instead of becoming centers of inquiry.

6.6 ROLE OF ICT IN FOSTERING CREATIVITY

Many ICT tools are available which could be used by a teacher in the context of developing creativity .Some of the tools immediately available are black board, poster, charts, audio cassette player, overhead projector, and sometimes computer. Each of these could be made use of while presenting the activities mentioned above . For example back board/charts could be used to present a picture on which a story required to be written by students, on a audio cassette a partial story could be recorded and played in the class and asking the students to complete a story. Many figures could be had on the computer screen which is some what abstract, and students can be asked to interpret them. Many puzzle and riddles are available on the websites, which can be solved individually, without asking for anybody's help.Mystery plots and divergent thinking questions can be posed by the computers with pictures, so that students can understand the problems well and answer them creatively Morphogical synthesis can be worked on the computer, where details of the parameters can be worked out and details can be combined to arrive at a novel response. These are only a few suggestion and many more can be worked out by the teachers based up on his creativity in using the ICT tools.

Check Your Progress 3

1. Brain storming was developed by ………………

    a. Covington   b. Crutech field

    c. Osborn   d. Cropley

2. Riddle construction or soldering is similar to ………………. Techniques.

    a. Synectic   b. Brain Storming

    c. Attribute listing and changingd. Lateral thinking

3. Puzzles require a …………….. to be found to solve it.

    a. Word   b. Catch

    c. Dead-end   d. Screw

4. The first psychologist, who drew the attention of all psychologists towards creativity in 1950's, was……………..

    a. Cropley   b. Torrance

    c. Guilford   d. Khatena

5. Teachers who wish to develop the creativity of their students must have to ………..

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a. displease the students   b. Displease the authorities

c. Tolerate disciplined.   d Tolerate disorder

6. Science fiction develops ………… in students.

a. Logical thinking   b. Imagination

c. Deductive thinking   d. Inductive thinking

6.7 ASSESSMENT OF CREATIVITY

Guilford and Torrance were the first psychologists to assess creativity. They found that many abilities put together form creativity. They are

1. Fluency: The ability to think of a large number of responses.

2. Flexibility: The ability to think of different types of responses.

3. Originality: The ability to think in a clever and uncommon manner.

4. Inquisitiveness: The ability to raise a number a questions out of curiosity.

5. Persistency: The ability to continue with the problem, even though you are failing long.

6. Elaboration: The ability to add details to the given situation or problem at hand.

Sensitivity to problems is considered as a feminine characteristic, whereas, risk taking is considered as a masculine characteristic. Therefore ,creative people have both characteristics is them. All these characteristics put together is called creativity. Only one characteristic will not form creativity. Scientists, poets, architects and advertisement people are exhibiting creativity more, compared to others.

Based on these characteristics assessment of creativity can be done, using tests. Assessment can also be done using observation and "Things done on your Own" check list. A trained observer can observe the child giving unusual answers, the process of developing a gadget, and the like. He/she can single out the more creative from others.

Testing Techniques: Torrance tests of creative thinking have been developed on the abilities given earlier. Guilford's tests are on "Structure of the Intellect" model. In India Baqer Mehdi and B.K.Passi were the first to develop creativity tests. PassiTests of Creativity have the following sub-tests.

a. Seeing Problems test: This test has 4 questions and students are asked to write the defects and problems of a postcard, chappel and the like.

b. Unusual uses test: This test has 2 questions where students are asked to write usual and unusual uses of a piece of cloth, a bottle.

Notes

c.   Consequences test: In this test, students are asked to write the consequences for improbable situation. Ex: (i) Suppose all people become mad (ii) suppose all females become males, and the like.

d.   Inquisitiveness test: In this test, students are asked to write a number of questions on a metronome and a placard.

e.   Persistency test: In this test, students are given a set of cubes, half cubes and cuboids. They are asked to construct a number of different shapes out of these given objects.

f.   Elaboration test: Students are given incomplete figures and students have to add details to them.

A number of other tests have been developed by other researchers based on Torrance, Guilford.

Check Your Progress 4

1.   If a student thinks of variety of responses. This capacity is called………….

    a.   Fluency   b. Flexibility

    c   Originality   d. Persistency

2.   A clever novel and uncommon response is called………………

    a.   Fluency   b. Flexibility

    c. Originality   d. Persistency

3.   First researchers to develop tests of creativity are ………………..

    a.   Guilford and Terman   b. Torrance &Terman

    c.   Guilford &Cattel   d. Guilford& Torrance

4.   If a student gives 7 defects of a chappel and the other student gives 3 defects, this ability is called……………..

    a.   Fluency   b. Flexibility

    c.   Originality   d   Persistency

6.8 LET US SUM UP

Creativity is the ability to give new answers, novel relationships. Its meaning with examples was discussed .Tests are used to assess creativity, as they can be administered to a large number of students. The tests are seeing problems test, unusual uses test, consequences test, test of inquisitiveness, persistency test and the test on elaboration.

Creative thinking is systematic thinking coupled with inspiration. The example

of Archimedes is an excellent for finding the steps of creativity. They are preparation, concentrated attention, withdrawal from the problem (incubation), flash and verification.

The teacher education might suggest that heredity and environment are the factors affecting creativity. It is the environment which influences creativity more . The psychologists have listed 4 p's to remember easily. They are creative product approach, creative process approach, creative person approach, and creative presentation or situation approach. Different techniques and activities for fostering creativity have been discussed. Suggestions have been provided to develop instructional materials.

6.9 ANSWERS TO CHECK YOUR PROGRESS

Check your Progress 1

1   a

2   b

3   c

Check your progress 2

1.   a

2.   b

3.   d

4.   c

Check your progress 3

1.   c

2.   a

3.   b

4.   c

5.   d

6.   b.

Check your progress 4

1   b

2   c

3   d

4   a

ANSWER TO UNIT END QUESTIONS

1. List the characteristics of creative person

   The creative persons likely to have most of the characteristics such as dominate,self confident, outspoken, sharp witted ,aggressive ,self centered, persuasive, verbally fluent, relatively free from expressing worries and complaints, independent, and free from conventional restraints and inhibitions

2. List three exercises that could used to develop lateral thinking

   Your list might have had 1) why questions, 2) Then questions, and 3) challenging assumptions

3. Mention the principles that are considered under ideation Stage

   In Ideation stage, the four principle are .

   1) Free whelming is emphasized.

   2) Criticism is avoided.

   3) Quality breeds quality. .

   4) Hitchhiking is allowed.

4. List a set of questions that could be used to foster creativity.

Questions can be developed on the variety that has been suggested in the material like puzzles, riddles, mystery plots, just suppose questions

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6.11 UNIT END EXERCISES

1.   List the characteristics of creative persons.

2.   List three exercises that could used to develop lateral thinking .

3.   Mention the principles that are considered under ideation stage .

4.   List a set of questions that could be used to foster creativity.

5.   Try the following:

   a.   Collect a set of riddles which are prevalent in your town/state and use it as instructional material in the classroom as suggested in the unit.

   b.   Write down a small story (incomplete story) ,read it to students or record in an audio tape and play it to students. And instruct students to complete the story. By this exercise try to see how students think different and creatively.

   c.   Ask students to think and write What will happen is on the wheel chair. Analyse the response .