UNIT-4 intelligence and creativity

Intelligence:meaning definition and types-theories of intelligence:two factor,thurstone group factor,thorndike multifactor ,Guilford structure of intellect,gardeners multiple intelligence-intelligence quotient-assessment of intelligence.creativity ,concept,factors and process-strategies for fostering creativity.

INTELLIGENCE

INTRODUCTION

In contrast to animals, man is considered to be endowed with certain cognitive abilities that make him a rational being. He can reason, discriminate, understand, adjust and face new situations. He is definitely superior to animals in all such aspects of behaviour. But human beings themselves are not alike. There are wide individual differences. A teacher easily discovers these differences among his pupils. Some learn with a good speed while others remain lingering for long. There are some who need only one demonstration for handling the tools properly while for others even the repeated individual guidance brings no fruitful result.

What is it that causes one individual to be more effective in his response to a particular situation than another. No doubt, interest, attitude, desired knowledge and skill etc., count towards this achievement. But still there is something that contributes significantly towards these varying differences. In psychology, it is termed as 'Intelligence'. In ancient India, our great rishis named it 'Viveka'

CONCEPT AND MEANING

Since time immemorial, attempts have been made to understand the meaning and concept of intelligence. Let us be acquainted with the concept and meaning of intelligence by throwing light on the following aspects:

1. Meaning and definition of intelligence.
2. Some established facts about intelligence.
3. Misconception about intelligence.

Meaning and Definitions of Intelligence

As discussed earlier, in our day-to-day conversation and individual is said to be intelligent in proportion to his success in general life situations. What is this intelligence that contributes towards such success, is a question that has been attempted by psychologists in different ways resulting in so many varied definitions. Below we give some of these important definitions.

Woodworth and Marquis

Intelligence means intellect put to use. It is the use of intellectual abilities for handling a situation or accomplishing any task.

Stern

Intelligence is a general capacity of an individual consciously to adjust his thinking to new requirements. It is general mental adaptability to new problems and conditions of life.

Terman

An individual is intelligent in proportion as he is able to carry on abstract thinking.

Wagnon

Intelligence is the capacity to learn and adjust to relatively new and changing conditions.

David Wechsler

Intelligence is the aggregate or global capacity of an individual to act purposeful to think rationally, and to deal effectively with his environment.

Alfred Binet

Intelligence is a capacity to think well, to judge well and to be self critical

Charles Spearman

Intelligence is rational thinking

Stoddard

Intelligence is the ability to undertake activities that are difficult, complex and abstract and which are adaptive to a goal, and are done quickly and which have social value and which lead to the creation of something new and different.

Factor Theories of Intelligence

Let us try to discuss some of these theories below:

UNITARY THEORY OR MONARCHIC THEORY

This theory holds that intelligence consists of one factor-a found of intellectual competency-which is universal for all the activities of an individual.

A man who has vigour can move so much to east as to the west. Similarly if one has the fund of intelligence, he can utilize it in any area of his life and can be as successful in

one area as in the other depending upon his fund. However, in actual life situations, the ideas propagated by this theory do not fit well. We find that the children who are bright in mathematics may, despite serious interest and hard work, be not so good in civics. A student very good in conducting science experiments does not find himself equally competent in learning languages. This makes us conclude that there is nothing like one single unitary factor in intelligence. Therefore, the unitary theory stands rejected.

ANARCHIC THEORY OR MULTIFACTOR THEORY

The main propagator of this theory was **E.L. THORNDIKE**. As the name suggests, this theory considers intelligence a combination of numerous separate elements or factors, each one being a minute element of one ability. So, there is no such thing as general intelligence (a single factor) and there are only many highly independent specific abilities which go into different tasks.

Monarchic and Anarchic theories thus hold the two extremes. Just as we cannot assume good intelligence to be a guarantee of success in all the fields of human life, we cannot also say with certain specific type of abilities, one will be successful in a particular area and completely unsuccessful in the other. As Gardner Murphy puts it, "There is a certain positive relationship between brightness in one field and brightness in another and so on." This brings us to the conclusion that there should be a common factor running through all tasks. The failure to explain such phenomena gave birth to another theory names Spearman's two factor theory.

Thorndike's multifactor theory: Thorndike believed that there was nothing like General Ability. Each mental activity requires an aggregate of different set of abilities. He distinguished the following four attributes of intelligence: (a) Level—refers to the level of difficulty of a task that can be solved. (b) Range—refers to a number of tasks at any given degree of difficulty. (c) Area—means the total number of situations at each level to which the individual is able to respond. (d) Speed—is the rapidity with which we can respond to the items. Thurnstone's theory : Primary mental abilities/Group factor theory: States that Intelligent Activities are not an expression of innumerable highly specific factors, as Thorndike claimed. Nor is it the expression primarily of a general factor that

pervades all mental activities. It is the essence of intelligence, as Spearman held. Instead, the analysis of interpretation of Spearman and others led them to the conclusion that 'certain' mental operations have in common a 'primary' factor that gives them psychological and functional unity and that differentiates them from other mental operations.

These mental operations then constitute a group. A second group of mental operation has its own unifying primary factor, and so on. In other words, there are a number of groups of mental abilities, each of which has its own primary factor, giving the group a functional unity and cohesiveness. Each of these primary factors is said to be relatively independent of the others. Turnstone has given the following six primary factors : (i) The Number Factor (N)—Ability to do Numerical Calculations rapidly and accurately. (ii) The Verbal Factor (V)—Found in tests involving Verbal Comprehension. (iii) The Space Factor (S)—Involved in any task in which the subject manipulates the imaginary object in space. (iv) Memory (M)—Involving ability to memorize quickly. (v) he Word Fluency Factor (W)—Involved whenever the subject is asked to think of isolated words at a rapid rate. (vi) The Reasoning Factor (R)—Found in tasks that require a subject to discover a rule or principle involved in a series or groups of letters. Based on these factors Turnstone constructed a new test of intelligence known as "Test of Primary Mental Abilities (PMA).

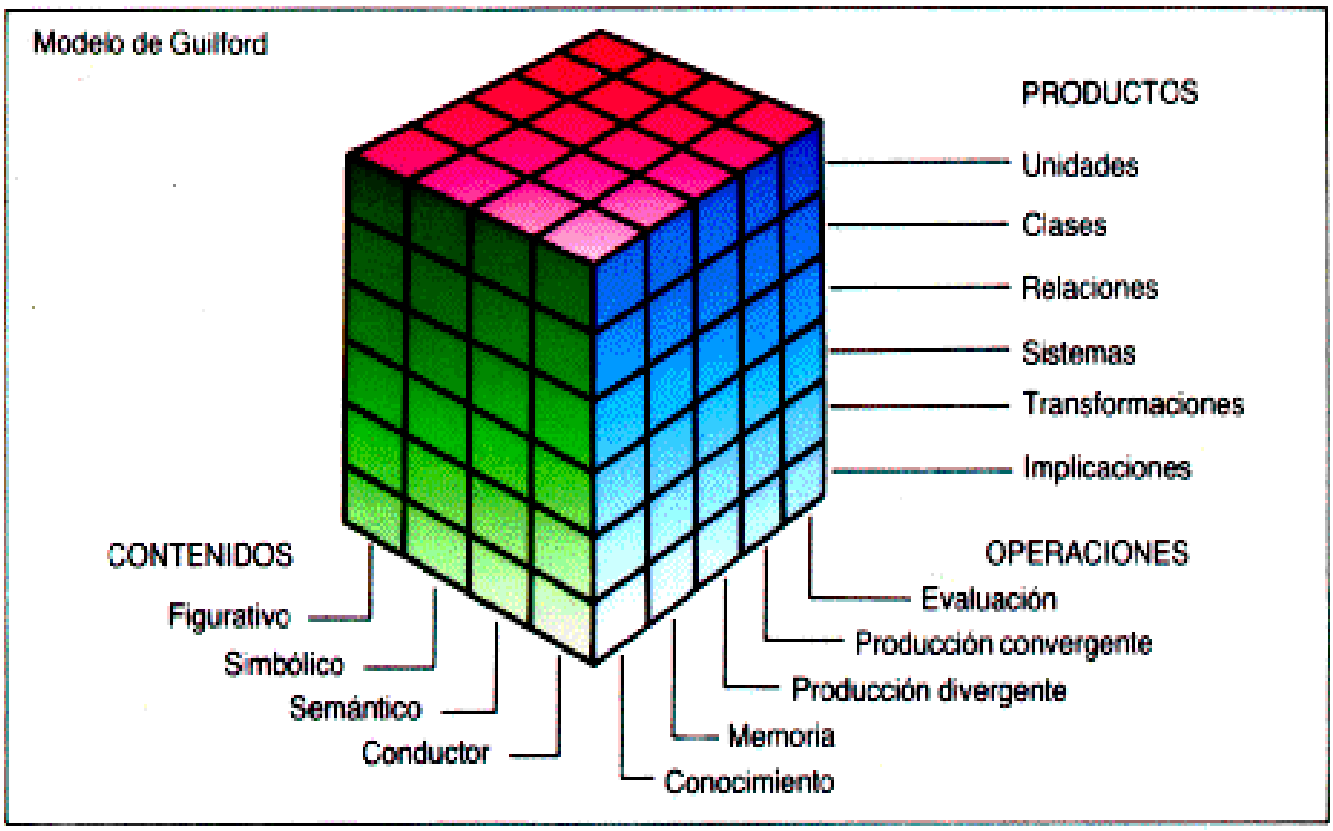
" GUILFORD'S MODEL OF STRUCTURE OF INTELLECT Guilford (1967, 1985, 1988) proposed a three dimensional structure of intellect model. According to Guilford every intellectual task can be classified according to it's (1) content, (2) the mental operation involved and (3) the practical-mechanical-spatial-physical (k.m.) ability. 3. The next level: minor group factors are divided from major group factors. 4. The bottom level: "s"(specific) factor. (Spearmen) Beginning in 1969, Vernon became increasingly involved in studying the contributions of environmental and genetic factors to intellectual development. Vernon continued to analyze the effects of genes and the environment on both individual and group difference in intelligence. He concludes that individual

difference in intelligence are approximately 60 percent attributable to genetic factors, and that there is some evidence implicating genes in racial group differences in average levels of mental ability.

Guilford's tri-dimensional theory:

JP Guilford (1961) developed a model of intelligence in which he explained that every intellectual activity can be described in terms of three different basic dimensions, viz., operations- the act of thinking, contents- the terms in which we think like words, symbols, etc. and products- the ideas we develop.

He has proposed his tri-dimensional theory of intelligence represented by cubical model. This model is provided with 120 primary abilities, and is a combination of 4 contents, 5 operations and 6 products (4x5x6=120).



The Figure 3.12 gives us the comprehensive idea of the primary mental abilities included in intelligence. However, Guilford (1967) has expanded his cube-shaped

model of intellect to include 150 factors, which includes 5 contents, 6 products and 5 operations (5x6x5=150).

This may be understood by studying this example: A child is asked to determine the day of the week on a particular date with the help of a calendar. The task involves operations like convergent thinking, memory and cognition.

How do you measure intelligence?

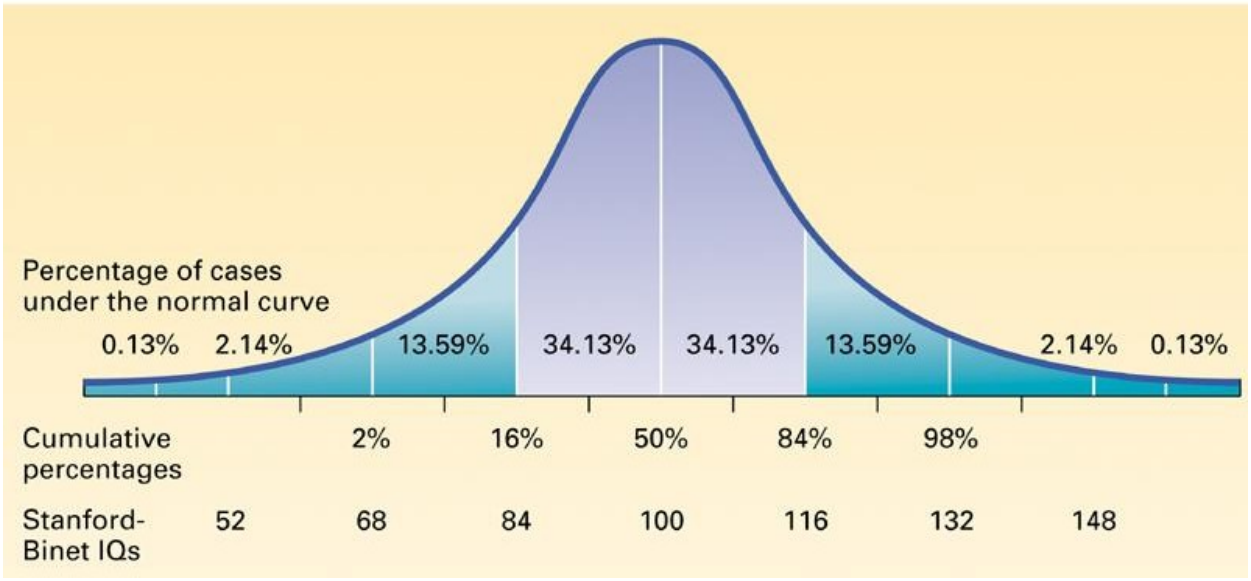
Intelligence Quotient (IQ): Measure of intelligence that takes into account a child's mental and chronological age

$$\text{IQ Score} = \text{MA} / \text{CA} \times 100$$

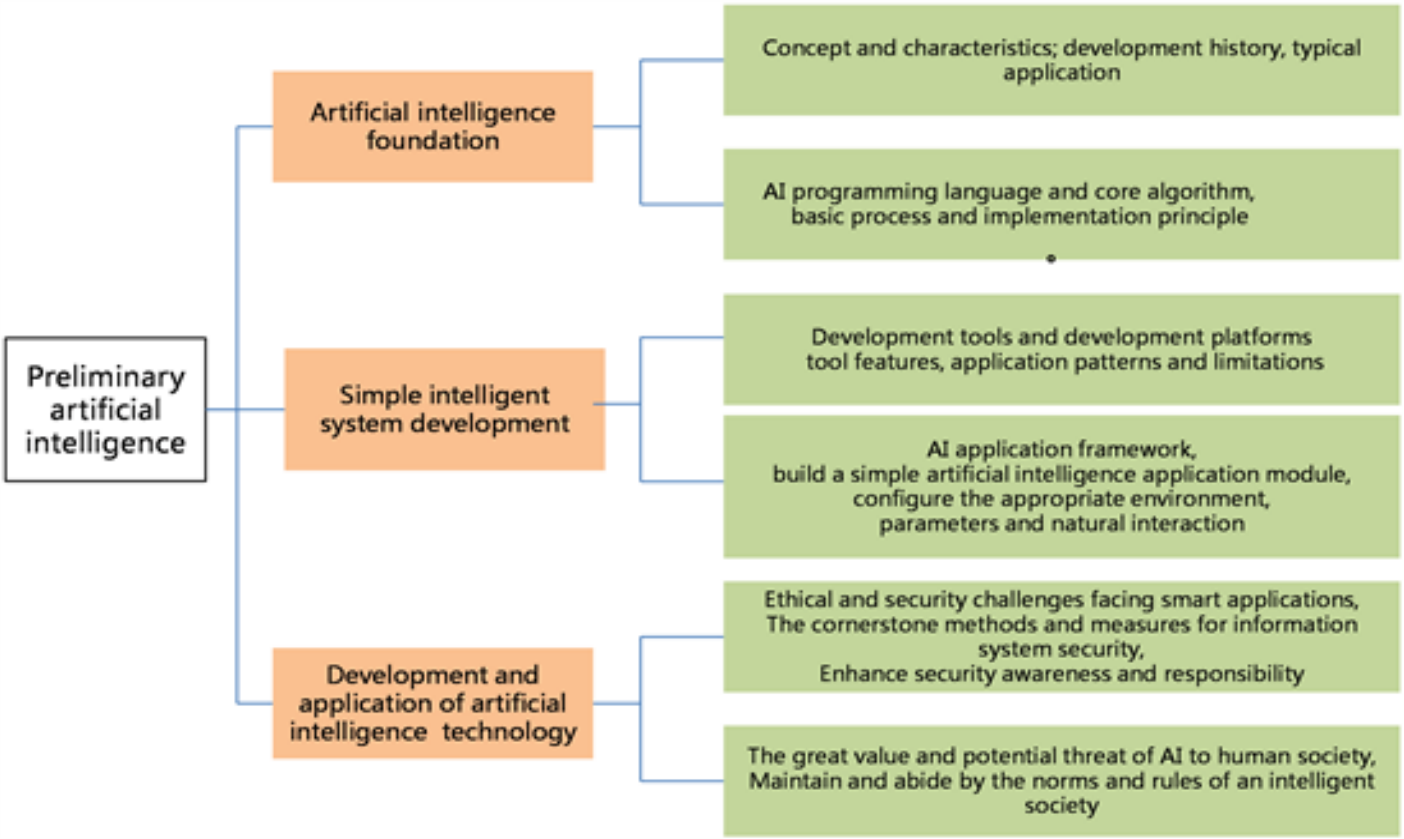
Mental age (MA): the typical intelligence level found for people at a given chronological age

Chronological age (CA): the actual age of the child taking the intelligence test

- People whose mental age is equal to their chronological age will always have an IQ of 100. If the chronological age exceeds mental age – below-average intelligence (below 100). If the mental age exceed the chronological age – above-average intelligence (above 100).



The normal distribution: most of the population falls in the middle range of scores between 84 and 116.



- Very Superior Intelligence (*gifted*) - Above 130
- Superior Intelligence - 120 to 129
- High Average Intelligence - 110 to 119
- Average Intelligence - 90 to 109
- Low Average Intelligence - 80 to 89
- Borderline Intellectual Functioning - 71 to 79
- Mild Mental Retardation - 55 to 70
- Moderate Retardation - 40 to 54
- Severe Mental Retardation - 25 to 39
- Profound Mental Retardation - Below 25

Intelligence tests were developed for the practical function of selecting students for admission or placement in schools. Originally these tests were not based on any theory of intelligence. They defined intelligence as the ability to do well in school.

Stanford-Binet

This test was developed to identify children who had serious intellectual difficulties -- such that they would not succeed in the public school system and who should not be placed in the same classes with other students. This test measured things that were necessary for school success such as understanding and using language, computational skills, memory, and the ability to follow instructions.

Individual responses in four

- content
- Verbal reasoning
- Quantitative reasoning
- Abstract/visual reasoning Short-term memory

Wechsler Scales

- Wechsler Adult Intelligence Scale-Third Edition (WAIS-III): Used with people
- 17 and older Wechsler Intelligence Scale for Children-Third Edition (WISC-III): Used with children 6 to 16

Multiple Intelligences (Howard Gardner)

Gardner thinks there are eight types of intelligence. He believes each of us have all of the eight types of intelligence to varying degrees. These multiple intelligences are related to how an individual prefers to learn and process information.

- Verbal skills: The ability to think in words and use language to express meaning
  - Sensitivity to the meanings and sounds of words, mastery of syntax, appreciation of the ways language can be used (authors, journalists, speakers, poets, teachers)
- Mathematical skills: The ability to carry out mathematical operations
  - Understanding of objects and symbols and of actions that be performed on them and of the relations between these actions, ability for abstraction, ability to identify problems and seek explanations (scientists, engineers, accountants)
- Spatial skills: The ability to think three-dimensionally
  - Capacity to perceive the visual world accurately, to perform transformations upon perceptions and to re-create aspects of visual experience in the absence of physical stimuli, sensitivity to tension, balance, and composition, ability to detect similar patterns (architects, artists, sailors, chess masters)
- Bodily-kinesthetic skills: The ability to manipulate objects and be physically adept
  - Use of one's body in highly skilled ways for expressive or goal-directed purposes, capacity to handle objects skillfully (surgeons, craftspeople,

dancers, athletes, actors)

- Musical skills: A sensitivity to pitch, melody, rhythm, and tone
    - Sensitivity to individual tones and phrases of music, an understanding of ways to combine tones and phrases into larger musical rhythms and structures, awareness of emotional aspects of music (musicians, composers, sensitive listeners)
- Interpersonal skills: The ability to understand and effectively interact with others
    - Ability to notice and make distinctions among the moods, temperaments, motivations, and intentions of other people and potentially to act on this knowledge (teachers, mental health professionals, parents, religious and political leaders)
- Intrapersonal skills: The ability to understand oneself
    - Access to one's own feelings, ability to draw on one's emotions to guide and understand one's behavior, recognition of personal strengths and weaknesses (theologians, novelists, psychologists, therapists)
- Naturalistic skills: The ability to observe patterns in nature and understand natural and human-made systems
    - Sensitivity and understanding of plants, animals, and other aspects of nature (farmers, botanists, ecologists, landscapers, environmentalists)

For fun – Figure out where you fall on the eight intelligences: http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks3/ict/multiple_int/what.cfm

Triarchic Theory (Robert Sternberg)

Intelligence comes in three forms.

- Analytical intelligence: The ability to acquire and store information; to retain or retrieve information; to transfer information; to plan, make decisions, and solve problems; and to translate thoughts into

performance

- How efficiently people process information
- How to solve problems, how to monitor solutions, and how to evaluate the results
- The use of strategies, acquiring knowledge
- Students high in analytical intelligence do well in class with lecture and objective tests. They are considered smart, get good grades, do well on traditional tests, and go to competitive colleges.

- Creative intelligence: The ability to solve new problems quickly; the ability to learn how to solve familiar problems in an automatic way so the mind is free to handle other problems that require insight and creativity
  - How people approach familiar or novel tasks
  - Compare new information with what they already know and to come up with new ways of putting facts together
  - To think originally
  - Students high in creative intelligence might not conform to traditional schools. They tend to give unique answers for which they might get reprimanded.
- Practical intelligence: The ability to get out of trouble; The ability to get along with other people
  - How people deal with their environment
  - How to size up a situation and decide what to do – to adapt to it, to change it, or to get out of it
  - Students high in practical intelligence don't relate well in traditional schools. They do well outside the classroom walls with good social skills and common sense.

Infant IQ Tests: Infant IQ tests are much less verbal than IQ tests for older children

Developmental Quotient (DQ): An overall developmental score that combines subscores on motor, language, adaptive, and personal-social domains in the

Gesell assessment of infants

Bayley Scales of Infant Development: Scales that assess infant development – current version has three parts: a mental scale, a motor scale, and the infant behavior profile

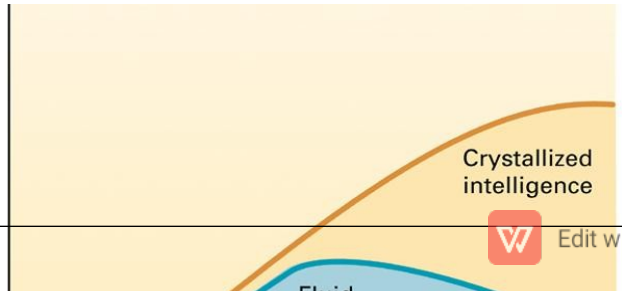
Fagan Test of Infant Intelligence: A test that focuses on the infant's ability to process information in such ways as encoding the attributes of objects, detecting similarities and differences between objects, forming mental representations, and retrieving these mental representations

The scores on the Gesell and Bayley tests *DO NOT* correlate highly with other IQ tests. The components of an infant IQ test are not the same as the components of other IQ tests. Unlike the other tests, the Fagan test is correlated with measures of IQ in older children (habituation and dishabituation in infancy predicts intelligence in childhood and adolescence - quicker habituation and greater amounts of looking in dishabituation reflect more efficient processing).

Intelligence through adolescence:

- There is a strong relationship between IQ scores obtained at ages 6, 8, and 9 and IQ scores obtained at 10.
- There is still a strong relationship between IQ scores obtained in preadolescent years and those obtained at age 18.
- However, individual intelligence scores can fluctuate dramatically over childhood and adolescence

Intelligence in adulthood:



Intellectual Development (John Horn):

Crystallized intelligence: accumulated

information and verbal skills, which increase with age

Fluid intelligence: the ability to reason abstractly, which steadily declines from middle adulthood

Cognitive mechanics versus Cognitive pragmatics (Paul Bates): Cognitive mechanics decline during aging whereas cognitive pragmatics do not.

- Cognitive mechanic (hardware of the mind; speed and accuracy of processing; attention; visual and motor memory; discrimination; comparison; categorization) have a biological/genetic foundation
- Cognitive pragmatics (culture-based software; reading and writing skills; language comprehension; educational qualifications; professional skills; knowledge of the self and coping skills) have an experimental/cultural foundation

Factors Influencing Intelligence

The Child's Influence:

- Genetics
-
- Genotype–Environment Interaction Gender
  - Boys and girls tend to be equivalent in most aspects of intelligence
    - The average IQ scores of boys and girls is virtually identical
      - The extremes (both low and high ends) are over- represented by boys

Girls as a group:

- Tend to be stronger in verbal fluency, in writing, in perceptual speed

(starting as early as the toddler years)

Boys as a group:

- Tend to be stronger in visual-spatial processing, in science, and in mathematical problem solving (starting as early as age 3)

The Immediate Environment's

- FamilyEnvironment

  influence

  School Environment
  - Attending school makes children smarter
    - Children from families of low SES and those from families of high SES make comparable gains in school achievement during the school year
  - What about during summer break?
    - During the academic year -- schools provide children of all backgrounds with the same stimulating intellectual environment.
    - Over the summer, children from low-SES families are less likely to have the kinds of experiences that would maintain their academic achievement.

The Society's

Influence •

Poverty

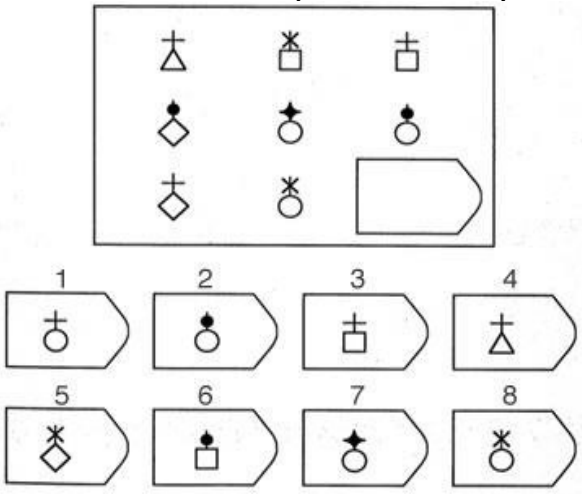
- The more years children spend in poverty, the lower their IQs tend to be
  - Children from lower- and working-class homes average 10-15 points below their middle- class age mates on IQ tests
- In many countries, children from wealthier homes score better on IQ test than children from poorer homes
  - The greater the gap in wealth in a country the greater the difference in IQ scores
- Chronic inadequate diet can disrupt brain development

        - Chronic or short-term inadequate diet at any point in life can impair immediate intellectual functioning
    - Reduced access to health service, poor parenting, and insufficient stimulation and emotional support can impair intellectual growth
- Race/Ethnicity
    - Overall, differences in IQ scores of children from different racial and ethnic groups describe children's performance ONLY in the environments in which the children live. These findings do not indicate potential, nor do they tell us what these children would do if they live someplace else. The current group differences in IQ are due to environmental differences -- as discrimination and inequality decrease -- IQ differences decrease.
        - The average IQ score of Euro-American children is 10-15 points higher than that of African-American children
        - The average IQ score of Latino and American-Indian children fall somewhere in between those of Euro-American and African-American children
        - The average IQ score of Asian-American children tend to be higher than any other group in the US
        - American-Indian children: Better on the performance part than the verbal part of an IQ test
        - Latino children: Better on the performance part than the verbal part of an IQ test
        - Asian-American children: Better on the performance part than the verbal part of an IQ test
        - African-American children: Better on the verbal part than the performance part of an IQ test

Are IQ tests culturally biased?

Culture-Free: Describing an intelligence test that, if it were possible to design, would have no culturally linked content

Culture-Fair: Describing an intelligence test that deals with experiences common to various cultures, in an attempt to avoid cultural bias



Raven's Progressive Matrices

A "culture-fair" or culture-reduced test that would make minimal use of language and not ask for any specific facts

These matrices progress from easy to difficult items -- measures abstract reasoning

Even on culture-fair tests, Euro-American and African-American children still differ
Culture can influence a child's familiarity with the entire testing situation

Even pictures can produce bias – some cultures have more experience with pictures than others

(K.H. Bearce, 2009, personal communication).

CREATIVITY

What is the importance of creativity? What is the concept of creativity? What are the types of creativity exists in the world? What is creativity in Education? Do you have questions like these? then you are in the right place. Here you will get complete knowledge on creativity.

It is important to understand creativity in business, art, education, and society. I wonder why to do people confuse with creativity and innovation? Here you will get complete information on creativity.

Understanding Creativity

Creativity is a very important process for the progress and major advances in every filed. Creativity was believed to be a gift of God long to be found in highly talented people.

Therefore, the view that the very intelligent or very superior people would be also creative was held.

Creativity was regarded as a rare quality of distinguished individuals. A creative person has an inborn talent. The relationship between creativity and intelligence is night linear nor curvilinear.

Concept of Creativity

For a long time, creativity was considered to be associated with an artistic individual who has been distinguished in various fields as painters, sculptures, or writers.

Creativity is distinguished by novelty, originality, and is usually inventive. Creativity is the power of the mind to form new ideas and thoughts. It helps you imagine something new and special.

Definitions of creativity

Drevdhal, J.E- "Creativity is the capacity of a person to produce compositions products or ideas which are essentially new or novel and previously unknown to the producer."

MC Kinnon- "Creative is a process extended in time and characterized by original adaptiveness and realization"

Taylor- "A process is creative when it results in a novel work that is accepted as tenable useful or satisfying by a group at a point in time."

Bronowski- "It is distinguished between discovery, invention, and creativity by saying that facts are discovered theory is invented by only a masterpiece is created."

Nature and Characteristics of Creativity

Creativity is the result of some interaction.

Creativity is the ability to synthesize ideas or objects

It is an ability to create new ideas, theories or objects

It is an ability to develop something original

It is a process as well as a product

It is a complex and dynamic process

It knows no special medium, place, person or time

It is the capacity to accept the challenge

It is a readiness to change self and environment

Process of Creativity

The process of creative thinking involves some specific and definite steps these are

Preparation

Incubation

Illuminative or inspiration and

Verification revision

Assessment of Creativity

- Enhances understanding of the human mind and personality
- Helps in individual teaching
- Helps in guiding the mental growth and development
- Emphasizes the need for guidance in future
- Helps in arranging the remedial program

Creativity can be identified in various areas like academic artistic, mechanical and scientific, etc.

Uses of Creativity Test

Creativity tests are useful in finding the nature and amount of creativity among children. This also helps us to provide the proper environment and guidance to develop the originality of the individual in a full-fledged way.

- Freedom to Respond
- Opportunity for involvement
- Encouraging originality and flexibility
- Removal of hesitation and fear
- Providing appropriate opportunities and atmosphere
- Developing healthy habits among children
- Using the creative resources of the community
- Avoidance of blocks to creative thinking
- Proper organization of the curriculum

- Use of special techniques

Strategies to Improve Your Creative Thinking Skills

To some degree, given the right circumstances, everyone can learn how to be creative. Others can work smarter around it by employing the following strategies:

1. Brainstorm Ideas

Structured processes and rules often restrict a group to freely express their ideas so this is why brainstorming is more encouraged among groups.

Brainstorming provides an environment that allows people to open up and share thoughts and ideas freely, without limitations and prejudice.

There are generally two types of brainstorming: Individual and Group brainstorming.

- **Individual brainstorming** – you brainstorm on your own without the fear of getting blocked or limited when in a group. This type of brainstorming works best for simple problems that you can solve without the need to escalate to a bigger group.
- **Group brainstorming** – you throw in ideas at one another in a group so others can help further develop an idea. This type of brainstorming works best for complex problems given you have just the right number of members participating in the activity.

Here are some popular techniques to employ when brainstorming with a group:

- **Rolestorming** – group members portray roles while brainstorming
- **Round-Robin brainstorming** – every member of the group contributes an idea first before having the entire group discuss it
- **Starbursting** – generates questions to boost creative juices

For a successful brainstorming session, you need to remind all group members to consider all ideas and possibilities, collaborate, and gather outside perspectives. These will help you collect as many ideas as you can without burning out.

2. Mind Maps

Unlocking creativity with the use of mind maps is also one great strategy. A mind map is a diagram that links information around a central topic. Unlike most note-taking methods, you can make use of images and colors other than words.

This graphical tool of boosting your creativity is highly effective because it makes idea generation easier as it allows you to go deeper about a concept or topic, narrowing down to the most specific in an organized manner.

Here's what a sample mind map looks like (Source: Lifehacker)

Mind Mapping makes problem-solving faster as ideas are broken down along the process. The following are some business activities wherein you can leverage the use of mindmaps:

- drafting a presentation
- developing goals and objectives
- deciding on opportunities
- creating a marketing plan
- creating a content plan

Now, you can manually create your own mind map or use a mind-mapping software to lessen the work. In a survey, 44% of those who have chosen to use a mindmap claim that the pace of work is significantly faster than before, while 40% claim that they have become significantly more creative.

3. Reframe Your Way of Thinking

If you want something you've never had, you must do something you've never done. Reframing your thinking essentially means changing your perspective.

To become more creative through reframing your thinking, you have to:

- be curious and eager to ask questions
- be intentional in your search for new information
- make time for imagination
- withdraw yourself every now and then from the noise

What makes reframing an even more powerful creativity tool is that it allows you to feel differently about a certain matter at hand.

Looking at things or problems from a different perspective will allow you to discover new angles you have not seen before because you were so focused on what you want to see or what you are used to seeing.

4. Roleplay

Roleplaying is a strategy that allows you to generate ideas based on possible outcomes of interactions and circumstances. This is a strategy that is most useful in coming up with ideas for a product and predicting how it will work in the market.

If you roleplay with your co-workers or other members in your team, you will be surprised to see several revelations of solutions that you missed when you were just writing down notes.

5. Reconceptualize Problems

You could hit a wall at any point wherein you are trying to solve a problem through creativity.

Unless you reconceptualize the problem by taking a step back, you will find it hard to carry on.

How do you reconceptualize a problem? Reconceptualizing a problem entails the following:

- examining a problem from a different angle
- searching for what appeals to emotions the most
- having a different mindset
- considering other perspectives
- considering the needs of your target audience

You must be able to proceed with your project once you have dissected your problem into a different bunch of specific focus areas.

6. Explore the Different Creativity Theories

There are different theories of creativity but here are 5 of the interesting ones:

- **Psychoanalytical Theory of Creativity** – According to this theory, you become creative as a response to challenging circumstances or repressed emotions.
- **The Mental Illness Theory of Creativity** – Some people only become creative if they are mentally ill in a way.
- **Creative Theory of Psychoticism** – All people who are creative also have psychotic tendencies like those of what people who have schizophrenia or bipolar disorder suffer from.
- **The Addiction Theory of Creativity** – Substances such as alcohol and drugs contribute to creativity, according to those who are proponents of this theory.
- **The Humanistic Theory of Creativity** – Unless humans have already met their basic needs, they cannot be creative.

There are also other theories of creativity that relate to innovation in business. Among such theories are the following:

- **Triarchic Theory of Human Intelligence** – This theory believes that creativity is a balance among other forms of thinking, including analytical thinking and practical thinking.
- **Investment Theory** – There has to be perseverance in selling a creative idea according to this theory.
- **Multiple Intelligences Theory** – This popular theory proposes that creative strengths are domain-specific. The strength of one's creativity depends highly on which of the eight domains of intelligence is most dominant in a person

By exploring the different theories of creativity, you can investigate further what fuels your creativity and how best can you improve it. Unless you educate yourself, you cannot make the most out of your strengths.

7. Daydream

Ever got scolded for daydreaming in the middle of a busy day at work?

Daydreaming is often associated with laziness and lack of focus.

But did you know that daydreaming could also be the reason why you are being highly creative at work?

A study in the Psychological Science journal reveals that allowing your mind to daydream and wander helps boost your creativity.

High levels of daydreaming help best in tasks that do not restrict the mind from coming up with weird ideas.

Harvard psychologists say that we spend 50% of our time thinking about things other than work. If you channel your daydreaming about business challenges and projects that need solutions, you may be able to come up with new solutions you would never have thought if you did not allow your mind to wander.

8. Ask A Lot of Questions

Asking the right questions is an art you should be able to master in order to achieve optimal creativity.

What kind of questions can help you become a creative problem solver?

These questions are the kind that explores possibilities and turn challenges into opportunities. Often, these are the questions that encourage higher-order critical thinking skills such as the ones that start with: how and why.

Successful market research studies are the ones that are concerned with solving problems. Center your questions around the challenges concerning:

- the nature of the problem
- product features

- time constraints
- existing competition
- customer feedback

Your questions don't have to be logical all the time. But, they work best if they are critical questions because these are the questions that encourage the use of creative thinking skills.

9. Determine Your Best Mood to Create

Understanding yourself better is the key to determining your best mood for creative activities.

Positive moods generally boost creativity. According to the researchers from the University of Western Ontario, positive moods enable cognitive flexibility that leads to having a positive mood that welcomes ideas freely.

Now, negative moods can also help according to a research by Professor Joseph Forgas at the University of New South Wales. Negative moods remove cognitive biases and improve memory and motivation which in turn boost creativity.

Now, there is no right or wrong mood to be in. Surely, a positive mood generally helps but a negative mood could be your way through a creativity challenge. This does not mean though that you should be in a negative mood if you could help it.

If you can find a way to be creative in a positive mood, that is more ideal.

What you can do is that you must pay attention to what mood you are in when you are most creative. This can help you understand why you feel demotivated at times and how you can combat demotivation to stay creative.

10. Distance Yourself from the Noise

There are several research studies that have found coffee shops to be the best place for being creative primarily because, in most coffee shops, the level of noise is moderate.

Too much noise can cause distractions but lack of “acceptable” noise can also be deafening, to the point of being demotivating.

Now if you truly can’t work in a noisy environment but you have to be at the office where there are plenty of interruptions to manage, you can:

- use headphones
- find a corner where noise is less
- go to a nearby cafe with permission
- confront a co-employee in a polite way

In the long run, you can deal with workplace noise, and relevant issues by presenting your problem with your senior manager or teammates.

11. Just Start

Just start creating.

According to another research, the decline in creativity among students was brought about by too much screen time and standardized testing. None of these activities help enhance the creative aspect.

The more you create, the more you will be able to hone your creative thinking skills especially when you:

- participate in experiential learning
- find inspirations around you
- understand your learning style and passion
- join activities that encourage creativity

The idea that you can only be creative if you are innately artistic must be corrected. Every human being can be creative as we all have the capability to invent or discover new ideas when we

embrace our strengths and engage in act activities that enhance our creative thinking skills.

With these strategies that help improve creative thinking skills among your employees or team members, scaling your business successfully becomes easily achievable.