UNIT – V : INDIVIDUAL DIFFERENCES AMONG LEARNERS

Unit 5: Individual differences among learners *: Differential learning needs of the learners with regard to abilities: intelligences, interest, aptitude, creativity, personality, values – learning styles – language (home language and language of instruction) – sociocultural differences (cultural capital), learning difficulties, and their implications for classroom practices and teaching*

Definition

Intelligence has been defined in many different ways including one's capacity for logic, abstractthought, understanding, self-wareness, communication, learning, emotional knowledge,memory, planning, creativity and problem solving. It can be more generally described as the ability to perceive information, and retain it as knowledge to be applied towards adaptive behaviors within an environment.

Intelligence is most widely studied in humans, but has also been observed in non-human animals and in plants. Artificial intelligence is intelligence in machines (such as software).

Within the discipline of psychology, various approaches to human intelligence have been adopted. The psychometric approach is especially familiar to the general public, as well as being the most researched and by far the most widely used in practical settings.

A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do.

Theories of Intelligence

Different researchers have proposed a variety of theories to explain the nature of intelligence. The following are some of the major theories of intelligence that have emerged during the last 100 years.

Charles Spearman - General Intelligence

British psychologist Charles Spearman (1863-1945) described a concept he referred to as general intelligence or the *g factor*. After using a technique known as factor analysis to examine some mental aptitude tests, Spearman concluded that scores on these tests were remarkably similar. People who performed well on one cognitive test tended to perform well on other tests while those who scored badly on one test tended to score badly on others. He concluded that intelligence is general cognitive ability that could be measured and numerically expressed.

Louis L. Thurstone - Primary Mental Abilities

Psychologist Louis L. Thurstone (1887-1955) offered a differing theory of intelligence. Instead of viewing intelligence as a single, general ability, Thurstone's theory focused on seven different "primary mental abilities." The abilities that he described were:

- Verbal comprehension
- Reasoning
- Perceptual speed
- Numerical ability
- Word fluency
- Associative memory
- Spatial visualization

Howard Gardner - Multiple Intelligences

One of the more recent ideas to emerge is Howard Gardner's theory of multiple intelligences. Instead of focusing on the analysis of test scores, Gardner proposed that numerical expressions of human intelligence are not a full and accurate depiction of people's abilities. His theory describes eight distinct intelligences based on skills and abilities that are valued in different cultures.

The eight intelligences Gardner described are:

1. Visual-spatial Intelligence

2. Verbal-linguistic Intelligence
3. Bodily-kinesthetic Intelligence
4. Logical-mathematical Intelligence
5. Interpersonal Intelligence
6. Musical Intelligence
7. Intrapersonal Intelligence
8. Naturalistic Intelligence

Robert Sternberg - Triarchic Theory of Intelligence

Psychologist Robert Sternberg defined intelligence as "mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one's life." While he agreed with Gardner that intelligence is much broader than a single, general ability, he instead suggested some of Gardner's intelligences are better viewed as individual talents.

Sternberg proposed what he referred to as 'successful intelligence' comprised of three different factors:

j. **Analytical intelligence:** This component refers to problem-solving abilities.

k. **Creative intelligence:** This aspect of intelligence involves the capacity to deal with new situations using past experiences and current skills.

l. **Practical intelligence:** This element refers to the ability to adapt to a changing environment.

Some Testing Major Questions About Intelligence Testing

In order to gain a deeper understanding of intelligence and the tests that have been developed in an attempt to measure this concept, it is important to understand the history of intelligence testing, the scientific research that has been conducted, and the findings that have emerged.

Final Thoughts

While there has been considerable debate over the exact nature of intelligence, no definitive conceptualization has emerged. Today, psychologists often account for the many different theoretical viewpoints when discussing intelligence and acknowledge that this debate is ongoing.

Start by learning more about some of these questions and discoveries by exploring the following section on intelligence and intelligence testing.

Howard Gardner

Some researchers in the field of intelligence have long argued that people have a variety of different intelligences. A person may be good at learning languages and terrible at learning music--or vice versa. A single number (a score on an IQ test) cannot adequately represent the complex and diverse capabilities of a human being.

Howard Gardner has proposed a theory of multiple intelligences. He originally identified seven components of intelligence (Gardner, 1983). He argues that these intelligences are relatively distinct from each other and that each person has some level of each of these seven intelligences. More recently, he has added an eighth intelligence to his list (Educational Leadership, 1997).

Many PBL-using teachers have studied the work of Howard Gardner and use some of his ideas in their teaching. For example, in creating a team of students to do a particular project, a teacher may select a team whose collective "highest" talents encompass most of the eight areas of intelligence identified by Gardner. The teacher may encourage a team to divide up specific tasks in line with specific high levels of talents found on a team. Alternatively, a teacher may encourage or require that team members not be allowed to work in their areas of highest ability in order to encourage their development of knowledge and skills in other areas.

Spearman's two factor theory

Charles Spearman developed his **two-factor theory of intelligence** using factor analysis. His research not only led him to develop the concept of the *g* factor of general intelligence, but also the *s* factor of specific intellectual abilities. L. L. Thurstone, Howard Gardner, and Robert Sternberg also researched the structure of intelligence, and in analyzing their data, concluded that a single underlying factor was influencing the general intelligence of individuals. However, Spearman was criticized in 1916 by Godfrey Thomson, who claimed that the evidence was not as crucial as it seemed. Modern research is still expanding this theory by investigating Spearman's law of diminishing returns, and adding connected concepts to the research.

Experimental Evidence

Spearman originally came up with the term General Intelligence, or as he called it, *g*, to measure intelligence in his Two Factor Theory on Intelligence. Spearman first researched in an experiment with 24 children from a small village school measuring three intellectual measures, based on teachers rankings, to address intellectual and sensory as the two different sets of measure: School Cleverness, Common Sense A and Common Sense B His results showed the average r between intellectual and sensory measures to be +.38, School Cleverness and Commonsense to be at +0.55, and the three tasks intercorrelated at +0.25.[8] This data was looked at other populations including high school. Spearman proposed that intellectual and sensory measure be combined as assessment of general intelligence.

g and s

Spearman proposed that his two-factor theory has two components. The general intelligence, *g*, influences the performance on all mental tasks, while another component influences abilities on a particular task To explain the differences in performance on different tasks, Spearman hypothesized that this other component was specific to a certain aspect of intelligence. This second factor he named *s*, for specific ability. Regarding *g*, Spearman saw individuals as having more or less general intelligence, while *s* varied from person to person on a task. In 1999, behavior geneticist Robert Plomin described *g* as:

"*g* is one of the most reliable and valid measures in the behavioral domain... and it predicts important social outcomes such as educational and occupational levels far better than any other trait."

To visualize *g*, imagine a Venn diagram with four circles overlapping. In the middle of the overlapping circles, would be *g*, which influences all the specific intelligences, while *s* is represented by the four circles. Though the specific number of *s* factors are unknown, a few have been relatively accepted: mechanical, spatial, logical, and arithmetical.

Rising interest in the debate on the structure of intelligence prompted Spearman to elaborate and argue for his hypothesis. He claimed that *g* was not made up of one single ability, but rather two genetically influenced, unique abilities working together. He called these abilities "eductive" and "reproductive". He suggested that future understanding of the interaction between these two different abilities would drastically change how individual differences and cognition are understood in psychology, possibly creating the basis for wisdom.[9]

Intelligence

Human beings are more unique and superior to other living beings in many aspects. the most important of which is INTELLIGENCE. Success in schools and colleges and in ones own profession, social adjustment, possession of general information etc are part of the meaning
commonly associated withtheconcept"intelligence".

According to Alfred Binet, Intelligence involves abilities such as, "Understanding,
Originality, Persistence and Self criticism".

According to Wechsler, "Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with the environment".

Thus Intelligence involves the 3 major aspects as:

i. Adjustment or adaptation ability
ii. Ability to learn

iii. Ability to carryout abstract thinking.

Theories of intelligence:

There are many views regarding what constitutes intelligence. Different psychologists have given different view points and formulated their own theories of intelligence. Some important such theories are as follows:

I. Unitary theory
II. Two factor theory of Spearman
III. Multi-factor theory of Thorndike
IV. Theory of Multiple Intelligence by Gardner
V. Group-factor theory of Thurstone
VI. Structure of Intellects by Guilford
VII. Hirarchial theory of Burt-Vernon

Unitary or Monarchy Theory

This theory holds that intelligence consists of all pervasive capacities. Binet, Terman and some other classical psychologists supported this view. According to this theory, if one has a fund of intelligence he can utilise it to any area of his life. The intelligence of a person gets stampedin all what he thinks and acts.

But in our practical life we see contrary to this. A genial mathematical professor may be absent minded or social ill-adjusted. Further analysis of scores in an intelligence test battery shows that different tests in the battery are not highly correlated. Hence, it is suggested that the unifactory approach is too simple and a complex model is needed to explain intelligence satisfactorily.

Two Factor theory of Spearman

Spearman proposed this Two factor theory of intelligence in 1904.
As the name implies, the theory involves two factors namely General(G) and Specific(S) factors.

The first factor was a general capacity which was basically a reasoning factor. According to this theory every different mental ability involves a general factor(G), which it shares with all other mental activities and a specific factor(S), which is shared with none.

The general factor is largely innate and accounts for success in all activities.
It is constant in the sense that for any individual it remains the same of all the correlated activities. It differs from individual to individual. But success in any specialised field very much depends on the

concern specific factor which is essentially learned.

Thus no person is absolutely uniform in his mental performance. So persons who are good in certain field or discipline may be poor in the other. Some who excel in Mathematics might be poor in language or literature.

Thus, performance in any situation is predicted by the amount of share of General and Specific factors in different intellectual activities.

Multi-factor theory of Thorndike

iii. Thorndike was an Associationist and he opposed the theory of General intelligence. He proposed that they are Specific stimuli and Specific response. According to him, Intelligence is nothing more than a convenient name for almost infinite number of actual or potential specific connections between these stimuli and responses.

According to the theory intelligence is said to be constituted of multitude of separate factors or elements each being a minute element or ability.A mental act involves a a number of these minute elements operating together. If any two tasks are correlated, the degree of correlation is due to the common elements involved in the two tasks.

Thorndike distinguished 4 attributes of intelligence. They are:

iv. Range
v. Level
vi. Area
vii. Speed

Level

This refers to the difficulty of a task that can be solved. If we think of all test items arranged in a sequential order of increasing difficulty, then the height that we can ascend on this ladder of difficulty determines our level of intelligence.

Range

This refers to the number of tasks at any given degree of difficulty that we can solve. Theoretically an individual possessing a given level of intelligence should be able to solve the whole range of task at that level. Range is determined not only by Level but also by the Breadth of experience and by opportunity to learn. In intelligence tests range is representated by items of equal difficulty.

Area

It refers to the total number of situations at each level to which the individual is able to respond. Area is the summation of all the ranges at each level of intelligence processed by an individual.

Speed

This is the rapidity with which an individual can respond to items.

Speed and altitude are positively related. Speed is much closely bound up with altitude than are the other attributes. We should not therefore emphasis speed too much in our intelligence test.

Group-factor theory of Thurstone

Thurstone and his associates proposed the Group factor theory. According to this theory, Intelligent activity is not an expression of innumerable highly specific factor as thorndike claimed. Nor it is the expression primarily of a general factor as Spearman held.

Instead the analysis and interpretation of Thurstone and others, lead them to the conclusion that certain mental operations have in common a PRIMARY factor that gives them psychological and functional unity and which differentiates them from other mental operations. These mental operations then constitute a group.

A second group of mental operations has its own unifying Primary factor; a third group has a third Primary factor and so on.

Each of these primary factor is said to be relatively independent of others. From further analysis, Thurstone and his associates concluded that seven Primary mental abilities emerged clearly enough for identification and used in test designing. They are:

Space visualisation: The ability to visualise geometric pattern.
Perceptual speed: Speed and accuracy of noting details.
Numerical ability: Speed and accuracy in simple arithmetic operations.
Verbal comprehension: Knowledge of meaning and relationship of words.
Word fluency: Ability to think and use many isolated words at a rapid rate.
Rote memory: Immediate recall or retrieval of material learned.
Reasoning: Ability to see relationship in situations described in symbols.

This theory has more clearly specified and defined test categories and types of test items to be included. Several test batteries have been constructed on the basis of this theory.

Based on the findings of this theory, H.E.Garret has postulated a developmental theory of intelligence in

which he argues that with increasing age, abilities differentiates out of general abstract intelligence into relatively independent factors.

The multiple intelligences by Gardner

Gardner articulated seven criteria for a behavior to be considered an intelligence. These were that the intelligences showed:

x. Potential for brain isolation by brain damage,
xi. Place in evolutionary history,
xii. Presence of core operations,
xiii. Susceptibility to encoding (symbolic expression),
xiv. A distinct developmental progression,
xv. The existence of savants, prodigies and other exceptional people,
xvi. Support from experimental psychology and psychometric findings.

Gardner chose eight abilities that he held to meet these criteria:

Spatial, linguistic, logical-mathematical, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic.

He later suggested that existential and moral intelligence may also be worthy of inclusion.

Logical-mathematical

This area has to do with logic, abstractions, reasoning and numbers and critical thinking. This also has to do with having the capacity to understand the underlying principles of some kind of causal system. Logical reasoning is closely linked to fluid intelligence and to general intelligence (g factor).

Spatial

This area deals with spatial judgment and the ability to visualize with the mind's eye. Spatial ability is one of the three factors beneath g in the hierarchical model of intelligence.

Linguistic

People with high verbal-linguistic intelligence display a facility with words and languages. They are typically good at reading, writing, telling stories and memorizing words along with dates. Verbal ability is one of the most g-loaded abilities. This type of intelligence is associated with the Verbal IQ in WAIS-III.

Bodily-kinesthetic

The core elements of the bodily-kinesthetic intelligence are control of one's bodily motions and the capacity to handle objects skillfully. Gardner elaborates to say that this also includes a sense of timing, a clear sense of the goal of a physical action, along with the ability to train responses.

People who have bodily-kinesthetic intelligence should learn better by involving muscular movement (e.g. getting up and moving around into the learning experience), and be generally good at physical activities such as sports, dance, acting, and making things.

Gardner believes that careers that suit those with this intelligence include: athletes, pilots, dancers, musicians, actors, surgeons, builders, police officers, and soldiers. Although these careers can be duplicated through virtual simulation, they will not produce the actual physical learning that is needed in this intelligence.

Musical

This area has to do with sensitivity to sounds, rhythms, tones, and music. People with a high musical intelligence normally have good pitch and may even have absolute pitch, and are able to sing, play musical instruments, and compose music. Since there is a strong auditory component to this intelligence, those who are strongest in it may learn best via lecture. They will sometimes use songs or rhythms to learn. They have sensitivity to rhythm, pitch, meter, tone, melody or timbre.

Interpersonal

This area has to do with interaction with others. In theory, individuals who have high interpersonal intelligence are characterized by their sensitivity to others' moods, feelings, temperaments and motivations, and their ability to cooperate in order to work as part of a group. According to Gardner in How Are Kids Smart: Multiple Intelligences in the Classroom, "Inter- and Intra- personal intelligence is often misunderstood with being extroverted or liking other people..." Those with this intelligence communicate effectively and empathize easily with others, and may be either leaders or followers. They typically learn best by working with others and often enjoy discussion and debate.

Gardner believes that careers that suit those with this intelligence include sales, politicians, managers, teachers, counselors and social workers.

Intrapersonal

This area has to do with introspective and self-reflective capacities. This refers to having a deep understanding of the self; what your strengths/ weaknesses are, what makes you unique, being able to predict your own reactions/emotions.

Naturalistic

This area has to do with nurturing and relating information to one's natural surroundings. Examples

include classifying natural forms such as animal and plant species and rocks and mountain types. This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef.

Existential

Some proponents of multiple intelligence theory proposed spiritual or religious intelligence as a possible additional type. Gardner did not want to commit to a spiritual intelligence, but suggested that an "existential" intelligence may be a useful construct. The hypothesis of an existential intelligence has been further explored by educational researchers.

Structure of Intellect by Guilford

Guilford and his associates proposed the theory of Structure of Intellects on their attempt of factor analysis. Guilford suggests that mind is composed of 3 major dimensions namely:

i. Process of operation
ii. Material or content
iii. Product

Process of operations:

- **Cognition:** This involves immediate discovery, rediscovery, awareness, comprehension and understanding.
- **Memory recording:** It is a fundamental operation. It refers to the retention of what is recognised for a short duration.
- **Memory retention:** It means the retention of what is recognised for a long period of time.
- **Divergent thinking**: It refers to the generation of information from the given data where the emphasis is on conventionally accepted best outcomes.
- **Convergent thinking:** It involves thinking in different directions, searching and seeking some different variety and novelty. It is closely related with creativity. It simply means thinking out of the box.
- **Evaluation:** It refers to the reaching of conclusion and decision as the goodness, correctness, adequacy and desirability of information.

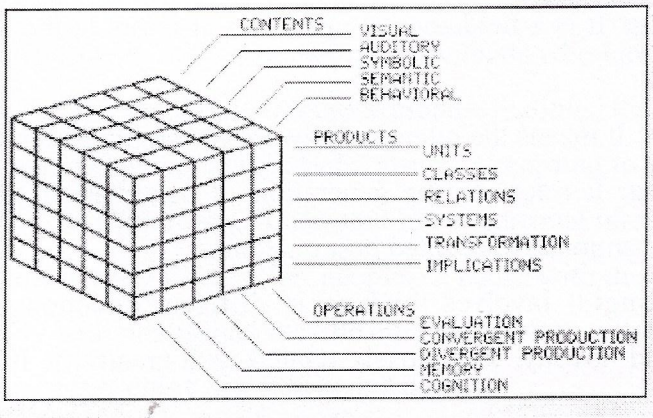
Material or Contents:

- **Visual content:** It refers to the concrete material perceived through ideas and thoughts.
- **Auditory content:** It refers to the matter or information perceived through ears.

- **Symbolic content**: t refers to the composition of letters, digits or other conventional signs and symbols usually organised in general patterns.
- **Semantic content:** t refers to the clear verbal form of meanings or ideas for which no examples are necessary.
- **Behavioural content:** It refers to the social intelligence which enables one to understand human communications.

Products:

- **Units:** This is similar to Gestalt psychology of figure and ground; relatively segregated items.
- **Classes**: It refers to conceptions underlying sets of information or data grouped by virtue of their common properties.
- **Relations**: It refers to the connections between items of information based on variables. These connections are more meaningful and definable.
- **Systems**: It refers to the aggregate of items of information or data with a structure.
- **Transformations:** It refers to the changes like redefination, modification in existing information or its functions.
- **Implications:** It refers to the explorations of information in the form of expectancies, predictions and consequences.



Thus according to Guilford there can be only 180 mental abilities that comes as a result of six processes operating on any one of the 5 contents to produce anyone of the 6 products. Thus 6*5* 6=180 mental abilities.

Guilford neglects the idea of some fixed amount of intelligence. Instead, he claims that development of

intellectual skill as in any other skill depends on practice. Unlike others, he is concerned with the social behaviour of the individual besides academic success. Therefore, he deviced some test of social sensibility. He considers Interpersonal skills. He refers to the dymanic cluster of skills which can always be improved.

Hirarchial Theory of Burt & Vernon

Cyril Burt and Bernon compared human intelligence to a growing tree. When it is a small plant, its thick trunk appears to be the primary part. As the plant grows into tree, many branches set off from different points of the trunk which in turn generate their own off shoots and thus the tree continues its expands.

Similarly, during childhood upto 10/12 years, intelligence operates as a single factor. In the early adolescence between 12 and 14 years, this single basic factor, branches off into two major factors as verbal educational (V.Ed) and Spatial mechanical (KM) and start maturing.

During adolescence, between 14 and 18 years, group factors get generated from these two major factors and they inturn produce more specific factors.

Thus the General factor grows into two elements such as Verbal education and Spatical mechanical as major factors. They further produce minor factors as verbal fluency, comprehension, rote memory from verbal education and Spatial perception and perceptial speed from Spatial mechanical.

Thus, different psychologists have formulated different theories based on the structure and function of various elements involved in intelligence.

Measurement of Intelligence:

Individual vs. Group IQ Testing

Individual intelligence tests

There are two major types of intelligence test, those administered to individuals and thsoe administered to groups.

The two main individual intelligence tests are the:

1. Stanford-Binet Intelligence Test.
2. Wechsler tests, i.e. WISC for children and WAIS for adults,

These are individual intelligence tests which require one-on-one consultation with the child. The tests involve various verbal and non-verbal subtests which can be combined to give an overall IQ, but which also provide valuable separate subtest scores and measures based on the

behavioural responses of the child to the test items.

Some of the content of these tests is clearly culture-loaded, hence there is the Kaufman Assessment Battery for Children - a more recent test which attempts to minimize cultural bias. The test also attempts to separate crystallised and fluid intelligence.

Group intelligence tests

Group-administered intelligence tests involve a series of different problems and are generally used in mass testing situations such as the military and schools.

Examples of group tests are:

- Multidimensional Aptitude Battery
- The Cognitive Abilities test
- Scholastic Assessment Tests

There has been a trend towards the use of multiple choice items. Many of theses tests have separately timed sub-tests. A major distinction made between types of items is verbal and non-verbal. In recent years there has been a trend away from verbal and mathematical items towards non-verbal represented problems in pictures.

Part of the reason for shifting away from verbal-based tests, in particular, is the issue of culture-loading.

Advantages of group tests:

- can be administered to very large numbers simultaneously
- simplified examiner role
- scoring typically more objective
- large, representative samples often used leading to better established norms

Disadvantages of group tests:

- examiner has less opportunity to establish rapport, obtain cooperation, and maintain interest
- not readily detected if examinee tired, anxious, unwell
- evidence that emotionally disturbed children do better on individual than group tests
- examinee s responses more restricted
- normally an individual is tested on all items in a group test and may become boredom over easy items and frustrated or anxious over difficult items

➢ individual tests typically provide for the examiner to choose items based on the test takers prior responses - moving onto quite difficult items or back to easier items. So individual tests offer more flexibility.

Performance tests

A performance test is an assessment that requires an examinee to actually perform a task or activity, rather than simply answering questions referring to specific parts. The purpose is to ensure greater fidelity to what is being tested.

An example is a behind-the-wheel driving test to obtain a driver's license. Rather than only answering simple multiple-choice items regarding the driving of an automobile, a student is required to actually drive one while being evaluated.

Performance tests are commonly used in workplace and professional applications, such as professional certification and licensure. When used for personnel selection, the tests might be referred to as a work sample. A licensure example would be cosmetologists being required to demonstrate a haircut or manicure on a live person. The Group-Bourdon test is one of a number of psychometric tests which trainee train drivers in the UK are required to pass.

Some performance tests are simulations. For instance, the assessment to become certified as an ophthalmic technician includes two components, a multiple-choice examination and a computerized skill simulation. The examinee must demonstrate the ability to complete seven tasks commonly performed on the job, such as retinoscopy, that are simulated on a computer.

Verbal versus performance tests

A verbal (or symbol) test poses questions to which the subject supplies symbolic answers (in words or in other symbols, such as numbers). In performance tests, the subject actually executes some motor activity; for example, he assembles mechanical objects. Either the quality of performance as it takes place or its results may be rated.

The verbal test, permitting group administration, requiring no special equipment, and often being scorable by relatively unskilled evaluators, tends to be more practical than the performance test. Both types of devices also have counterparts in personality measurement, in which verbal tests as well as behaviour ratings are used.

Written (group) versus oral (individual) tests

The oral test is administered to one person at a time, but written tests can be given simultaneously to a number of subjects. Oral tests of achievement, being uneconomical and prone to content and scorer unreliability, have been supplanted by written tests; notable exceptions include the testing of illiterates and the anachronistic oral examinations to which candidates for graduate degrees are liable.

Proponents of individually administered intelligence tests (e.g., the Stanford-Binet) state that such face-to-face testing optimizes rapport and motivation, even among literate adult subjects. Oral tests of general aptitude remain popular, though numerous written group tests have been designed for the same purpose.

The interview may provide a personality measurement and, especially when it is standardized as to wording and order of questions and with a key for coding answers, may amount to an individual oral test. Used in public opinion surveys, such interviews are carefully designed to avoid the effects of interviewer bias and to be comprehensible to a highly heterogeneous sample of respondents.

Personality is a term that has many general meanings. Sometimes the word refers to the ability to get along well socially. For example, we speak of experiences or relationships, which are said to give a person "more personality." The term may also refer to the most striking impression that an individual makes on other people. We may say, 'she has a shy personality'.

To a psychologist, personality is an area of study that deals with complex human behaviour, including emotions, actions, and cognitive (thought) processes. Psychologists study the patterns of behaviour that make individuals different from one another.

The word personality is used not only in the field of psychology, but can be applied in most of the other fields of one day-to-day life. A good deal of research has been done on the topic but no final conclusions have been drawn as regards the nature of personality.

The psychologists have defined the term personality in various ways but they were not completely successful in explaining it in clear and definite terms because human personality is a very complex phenomenon. Personality is not a fixed state but a dynamic totality, which is continuously changing due to interaction with the environment.

The conduct, behaviour, activities, movements and everything else concerning the individual are known as personality. It is the way of responding to the environment; the way in which an individual adjusts with the external environment is personality.

DEFINITIONS AND NATURE OF PERSONALITY

The term personality has been derived from the Latin word "Persona" which was associated with Greek theater in ancient times. The Greek actors commonly used to wear masks on their faces during their

performances on the stage. The mask worn by the actors was called persona. Personality was thought to be the effect and influence which the individual wearing a mask left on the audience.

Some of the most referred definitions of personality are:

Each individual's characteristically recurring patterns of behaviour are known as personality.

–L.Kolb

Personality is that which permits a prediction of what a person will do in a given situation.

–R.B.Cattel

In the words of Munn, "Personality may be defined as the most characteristic integration of an individual's structure, modes of behaviour, interest, attitude, capacities, abilities, and aptitudes."

Woodworth and Marquis define personality as "the total quality of an individual's behaviour as it is revealed in his characteristic habit of thought and expression, his attitudes, interests and his own philosophy of life."

Allport who devoted most of his time for research on personality defines: "personality is the dynamic organization within the individual of those psychological systems that determine his unique adjustment to his environment."

This definition is very comprehensive and includes all aspects of an individual's personality. Here, the word 'dynamic' means that personality is undergoing a constant change but is still organized. It constitutes two types of systems: mental and physical, and these two systems interact with the internal and external environments. The word 'determine' emphasizes that it is the psychophysical system, which activates the organisms for action.

In a layman's terminology, by personality we mean the sum total of the ways we behave, especially towards others. For instance, based on one's good physical appearance, good character, aggressive or good manners, a person may be categorized as having a "fine", "strong" or a magnetic personality.

Psychologically, personality is the integrated and dynamic organization of the physical, mental, moral, and social qualities of the individual that manifests itself upon others in social life.

Nature of Personality

Personality is a whole rather than a sum of parts. We cannot identify the personality of a person on the basis of his physique or his intellectual level or his character. But the all these elements put together are made to function in harmony which makes his personality. The conduct, behaviour, activities, movements

and everything else concerning the individual are known as personality. It is the way of responding to the environment. The way in which an individual adjusts with the external environment is personality. Let us discuss the following points regarding the nature of personality.

- **Personality is the result of both heredity and environment:**
  Heredity involves all those physiological and psychological peculiarities, which a person inherits from his parents. These peculiarities are transmitted to us through genes. It is indisputable that heredity determines the difference of sex and it is on this basis that some scientists contend that heredity determines personality because it is the difference of sex,
  which determines the personality of men and women.

  Environment has a very significant effect on man. Its effect starts from his birth and continues almost till his death. The status of the child, youth and the old man in the family and in the society is not same and as a result of this difference, a man's roles, temperaments, ways of thinking, tendencies and character are affected; all these determine the personality of men and women.

  In the same way, the status of the person in places like school, occupation, social situation, etc. affects his personality.
- **Personality is composed of traits, which are by and large learned or acquired:** By the time we become a mature personality, the contribution of learning is so prominent that we often misinterpret personality as the equivalent of learning. It is important to note that learning plays a very important role in the making of one's personality. In order to explain the dynamics of one's personality, it is sometimes convenient to refer to the various types of learning, which a person is able to exhibit in his behavioural range.
- **Personality implies an integration of various traits:** All the elements, which are ultimately identified as parts of personality structure, get integrated rather than assembled together. Thus, the integration of various traits results into a distinct whole which is known as personality of an individual.
  Personality represents a unique integration of traits so as to differentiate one person from another on the basis of this very quality. The unique way in which we laugh or smile, weep or cry, talk or lecture, greet or salute becomes the watermark of our personality.

- **Personality is a dynamic process:** Personality is the dynamic organization within the individual. Here, dynamic means that personality is undergoing a constant change but is still organized. Personality development is a reciprocal relationship between the ways in which a person views his

experiences and his actual social and interpersonal experiences. Development of personality is a continuous growth, which occurs because of the inherent tendency toward self-growth on the one hand and our personal, environmental nd social experiences on the other hand. Therefore, we can say that personality is a dynamic process.

Characteristics of Personality

We have seen how personality has been variously defined by psychologists, though there are differences in views, but even then all psychologists agree on certain common characteristics. Our understanding of the nature of personality will be clear if we go through the characteristics of personality. These are:

- **Unique:** Each individual personality is unique and specific. No two persons, not even identical twins have exactly the same qualities and attributes.
- Organization: Personality is not just one or more aspects of behaviour, but it is one's total integrated behaviour, woven into a whole. The greater the degree of organization, the more healthy and normal the person is.
- **Consistency or stability:** Consistency or stability is one of the characteristics of personality. A person is recognizable from situation to situation by the consistent characteristics that are reflected in his behaviour.
- **Dynamic:** Although the personality of an individual remains stable to a large extent, it can't be said to be static, It is always dynamic and continuously in the process of change and modification. Think about your own personality – what type of person you are at the present moment and what type you were while studying in school.
- **Self consciousness :** Personality exhibits self consciousness and it is the proud possession of human being. Man is described as having personality when the idea of "self' enters into his consciousness. A dog or a cow has no personality of its own because neither of the two possess self-consciousness.
- **Psychophysical systems:** Personality is neither exclusively physical nor is exclusively mental. Similarly it is neither the product of heredity exclusively, nor it is the product of acquired behavior or learning exclusively. Organization of personality entails the functioning of both 'body' and 'mind'. Psychophysical systems composed of habits, atti tudes, sentiments etc. are the product of hereditary endowments and the acquired life experiences of the individual.
- **Social:** Personality is completely social. Personality has existence only in relation to the external world. An individual's relation with his environment, his feelings, attitudes, are basic to the idea of personality. An integrated personality is one which make harmonious adjustment to environment, particularly the social environment.

GENETIC AND CULTURAL FACTORS OF PERSONALITY

Hereditary and culture both play an important role in the development of personality. An individual is the by-product of the constant interaction of heredity and environmental influences. The factors, which influence the development of the personality of a person, can be broadly classified into two groups:

A.GENETIC OR HEREDITARY FACTORS

B. CULTURAL FACTORS

In the 1960s and 1970s, some psychologists dismissed the whole idea of personality, considering human behaviour to be content specific. This idea was supported by the fact that personality often does not predict behaviour in specific contexts. However, more extensive research has showed that when behaviour is aggregated across contexts, that personality can be a modest to good predictor of behaviour. Almost all psychologists now acknowledge that both social and individual difference factors influence behaviour. The debate is currently more around the relative importance of each of these factors and how these factors interact.

A Background on Intelligence Tests

The earliest recorded intelligence test was made by the Chinese emperor Ta Yu in 22,000 BC. It was devised to examine government officials, and was used as the basis for promoting or firing them. Today, intelligence testing forms part of the scope of Psychometry, a branch of Psychology specialized in psychological testing. Psychometrists create, administer, and interpret tests and their results. Psychometrists typically hold masters in Psychology, and underwent extensive courses on testing. They work in educational, business, and clinical settings.

Intelligence testing began to take a concrete form when Sir Francis Galton, an English psychologist considered to be the father of mental tests, demonstrated in the late 19th century that individuals systematically differ across then-known key components of intelligence (sensory, perceptual, and motor processes). Although the tests he designed resulted to very few significant findings, they nevertheless brought forth important questions about intelligence - questions that remain tantamount to the refinement of intelligence testing even to this day. These questions revolve around the methods of measurement, components, and heritability of intelligence.

Popular Intelligence Tests

Intelligence tests are classified in two ways - individual/group, aptitude/achievement. Aptitude tests measure the potential development of the testee, like a tool for predicting future performance. Achievement tests, on the other hand, measure mastery of a specific domain, and thus evaluate current performance. Abstract tests are mainly aptitude in type, while quarterly examinations in schools are mainly achievement in type. Intelligence tests also differ in how they are being administered, whether by individual or by group. Individual tests consider the interaction between the tester and the testee, and thus are more customized and personal. On the other hand, groups tests are more economical, saving time.

money and effort. Because group tests are more superficial than individual tests, they only serve supplemental basis when it comes to special placements. For example, the legal requirements for placing children in special education include group and individual tests, and additional information outside the testing situation. Intelligence tests today, however, are more complicated than these basic classifications. They can be mainly aptitude type, mainly achievement type, or both; and can be administered individually and/or by group.

Stanford-Binet Test. This test is given to individuals even as young as 2 years old and up to adulthood. The test consists of various items requiring verbal and nonverbal response. For example, a 6-year old child may be asked to define a list of words and also to trace a maze path. The test attempts to measure cognitive processes, such as memory, imagery, comprehension and judgment. The test also emphasizes the importance of considering age when administering and interpreting results. After collecting results from a large number of testees through the years, findings were found to approximate a normal distribution, or a bell curve, in which most testees fall in the middle scores (84-116) and about 2% scores greater than 132 and less than 68. The Stanford-Binet test started in 1904 when Alfred Binet was asked to devise a method to separate students who benefit from regular classroom instruction and those who need to be placed in special schools. Through the help of his student, Theophile Simon, Binet came up with 30 items and administered the test to 50 nonretarded children aged 3 to 11 years old. Based on the results of the test, Binet was able to identify the norm for mental age. For example, 6-year old Simon scored 20, which is the average score of 9-year old children; thus, his mental age is 9. In 1912, William Stern formulated the notion of intelligence quotient (IQ) in which he divided the mental age by the chronological age and multiplied it by 100. Based on this formula, he classified testees as "average", "above average", and "below average". Lastly, in 1985, Lewis Terman revised the original test in Stanford University, hence the name. His revisions include detailing and classifying insructions, adding other content areas (such as evaluating short-term memory, and verbal, quantitative and abstract reasoning), applying the concept of IQ in intepreting results, extensively calculating the norms, and identifying a general score for intelligence.

Weschler Scales. David Weschler developed different scales to measure intelligence. The first scale was developed in 1939. Today, it is known as the Weschler Adult Intelligence Scale - III (WAIS-III). Other scales he developed are the Weschler Intelligence Scale for Children - III (WISC-III), which is for children and adolescents aged 6 to 16 years old, and the Weschler Preschool and Primary Scale of Intelligence (WPPSI), which is for children aged 4 to 6.5 years old. All of Weschler's scales are divided into 6 verbal subscales and 5 nonverbal subscales. Norms developed from nonverbal subscales are astonishingly more representative than the abstract content of the Stanford-Binet test. Weschler scores his scales in two ways: there are specific IQ scores for all subscales and a general IQ score for the entire scale. Scoring is therefore more rigorous and possibly more accurate than the Stanford-Binet test.

Army Alpha Test and Army Beta Test (1917). The Army tests are the first intelligence tests that were administered in a group. The Army Alpha test is a written exam, whereas the Army Beta test is a performance exam given orally or verbally to illiterate recruits.

Scholastic Assessment Test (SAT). This test is taken by almost 1 million US high school seniors every year to gain passage to colleges and universities. The SAT is mostly an achievement test rather than an aptitude test, and is therefore oftentimes not viewed as an intelligence test. But it can still be considered an intelligence test because it measures and scores the same domain abilities - verbal and mathematical proficiency; and it was similarly developed to predict school success as with the Stanford-Binet test. Although the SAT is administered in a group, the result of the test is interpreted along with other individual measures, such as high school grades, quality of the high school, recommendation letters, personal interviews, and special activities or circumstances that benefited or impeded the testee's intellectual ability (e.g., contests, projects, outside involvements, etc.). Although the SAT is widely used as an index to accept high school students in colleges and universities, there have been many criticisms about it. First, research shows that simply coaching students on a short-term basis can dramatically raise their SAT scores by 15 points. Second, SAT scores appear to show that males score better than females by 42 points on average. Further review by the College Board shows that males tend to score 35 points more on mathematical contents and 8 points more on verbal contents than females. According to the Educational Testing Service, the SAT aims to predict first year grades, but actual data shows that females tend to outperform males during the first year. This could mean that the SAT is not equally reliable for both male and female testees.

Criteria for Intelligence Tests

A good intelligence test must be valid, reliable and standard.

Validity refers to how well the test accurately capture what it attempts to measure. For intelligence tests, that is "intelligence". For example, a test measuring language proficiency in itself cannot be considered an intelligence test because not all people proficient in a certain language are "intelligent", in a sense. Similarly, a test measuring mathematical ability need not include instructions using cryptic English. Validity can be established in two ways. First, there should be a representative sample of items across the entire domain of intelligence (i.e., not just mathematical abilities, but verbal skills as well). This is where Weschler scales seem to fare better than the Stanford-Binet test. Second, the results should match an external criterion. Common external criteria are educational achievements, career success, and wealth; that is, intelligent people are often achievers, whether in school, work, or finances.

Reliability refers to the stability and consistency of scores the intelligence test produces. For example, Peter took a random 50% sample of an intelligence test on his first year, and answered 75% of the test items correctly. Thereafter, Peter took the test year after year. Surprisingly, the results were inconsistent. He correctly answered 90% of the items in his second year, 40% of the items in his third year, and 60% in his first year. Meanwhile, Annie took the intelligence test every month in her first year, and the results

seemed nonsense. Because the results vary significantly every retake, then the test loses its ability to be predictive of what it attempts to measure.

Standardization refers to the uniformity of administering and scoring the test. An intelligence test does not consist only of the test items; it includes the process in which the test is given and interpreted. For example, if the test requires an interview, all the interviewers should ask the same questions in the same way. Ideal standardization is, of course, impossible, but the test should attempt to eliminate certain factors that can compromise the test's reliability.

Cultural Bias in Intelligence Tests

Intelligence tests are traditionally biased with the dominant culture. Early intelligence tests consistently showed that urban testees scored better than rural testees, that middle-income test-takers fare better than low-income test-takers, and that White Americans get higher scores than African-Americans. For example, an early intelligence test asks children what would be the best thing to do when one finds a 3-year old child alone in the street. The correct answer then was to call the police. This is where the minority's perception differ. Most rural children have negative impressions about authority figures, including the police; most low-income children know where to look for a security guard, but not a policeman; and, the African-American culture allows children as young as 3 years old to roam about and explore their environment alone, and so most African-American children might not even understand what the question is all about.

Intelligence tests today attempt to minimize cultural bias by administering the test and adjusting the norms to and for a large and more representative sample of the population. However, intelligence tests continue to be biased toward the dominant group. There are some test-makers who attempt to go beyond "norms" adjustment, and actually modify or include test items from the minority group's domain expertise. These attempts make up the culture-fair tests - intelligence tests intended to be culturally unbiased. Two popular culture-fair tests are the Raven Progressive Matrices and the System of Multicultural Pluralistic Assessment (SOMPA). The Raven Progressive Matrices attempts to eradicate language barrier and cultural factors inherent to the language of the test by making the test simply nonverbal; however, results still show that the educated consistently score better than the illiterate. So far, the SOMPA is considered to be the most comprehensive of the culture-fair tests today. The SOMPA measures both verbal and nonverbal intelligence by utilizing WISC-III; it takes into consideration the testee's social and economic background by conducting a 1-hour interview with the parents; it factors in the testee's social adjustment in school by administering questionnaires to parents; and, it also identifies the testee's physical health by means of a medical examination.

Culture-fair tests today seem to reveal that intelligence tests do not accurately capture the notion of intelligence; rather, they simply reflect the priorities of the dominant culture.

Creativity

Creativity is a phenomenon whereby something new and somehow valuable is formed. The created item may be intangible (such as an idea, a scientific theory, a musical composition or ajoke) or a physical object (such as an invention, a literary work or a painting).

Scholarly interest in creativity involves many definitions and concepts pertaining to a number of disciplines: psychology, cognitive science, education, philosophy (particularly philosophy of science), technology, theology, sociology, linguistics, business studies, songwriting, and economics. covering the relations between creativity and general intelligence, mental and neurological processes, personality type and creative ability, creativity and mental health; the potential for fostering creativity through education and training, especially as augmented by technology; and the application of creative resources to improve the effectiveness of teaching and learning.

Definition

In a summary of scientific research into creativity, Michael Mumford suggested: "Over the course of the last decade, however, we seem to have reached a general agreement that creativity involves the production of novel, useful products" (Mumford, 2003, p. 110),or, in Robert Sternberg's words, the production of "something original and worthwhile".Authors have diverged dramatically in their precise definitions beyond these general commonalities: Peter Meusburger reckons that over a hundred different analyses can be found in the literature. As an illustration, one definition given by Dr. E. Paul Torrance described it as "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies:testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results."

Assessing creativity

Creativity quotient

Several attempts have been made to develop a *creativity quotient* of an individual similar to the intelligence quotient (IQ), however these have been unsuccessful.

Psychometric approach

I. J. P. Guilford's group, which pioneered the modern psychometric study of creativity, constructed several tests to measure creativity in 1967:

II. Plot Titles, where participants are given the plot of a story and asked to write original titles.

III. Quick Responses is a word-association test scored for uncommonness.

IV. Figure Concepts, where participants were given simple drawings of objects and individuals and asked to find qualities or features that are common by two or more drawings; these were scored for uncommonness.

V. Unusual Uses is finding unusual uses for common everyday objects such as bricks.

VI. Remote Associations, where participants are asked to find a word between two given words (e.g. Hand _____ Call)

VII. Remote Consequences, where participants are asked to generate a list of consequences of unexpected events (e.g. loss of gravity)

VIII. Building on Guilford's work, Torrance developed the Torrance Tests of Creative Thinking in 1966.[] They involved simple tests of divergent thinking and other problem-solving skills, which were scored on:

IX. **Fluency** – The total number of interpretable, meaningful and relevant ideas generated in response to the stimulus.

X. **Originality** – The statistical rarity of the responses among the test subjects.

XI. **Elaboration** – The amount of detail in the responses.

Social-personality approach

Some researchers have taken a social-personality approach to the measurement of creativity. In these studies, personality traits such as independence of judgement, self-confidence, attraction to complexity, aesthetic orientation and risk-taking are used as measures of the creativity of individuals. A meta-analysis by Gregory Feist showed that creative people tend to be "more open to new experiences, less conventional and less conscientious, more self-confident, self-accepting, driven, ambitious, dominant, hostile,and impulsive." Openness, conscientiousness, self-acceptance, hostility and impulsivity had the strongest effects of the traits listed. Within the framework of the Big Five model of personality some consistent traits have emerged. Openness to experience has been shown to be consistently related to a whole host of different assessments of creativity. Among the other Big Five traits, research has demonstrated subtle differences between different domains of creativity. Compared to non-artists, artists tend to have higher levels of openness to experience and lower levels of conscientiousness, while scientists are more open to experience, conscientious, and higher in the confidence-dominance facets of extraversion compared to non-scientists.

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Fostering creativity

Nickerso provides a summary of the various creativity techniques that have been proposed. These include approaches that have been developed by both academia and industry:

i. Establishing purpose and intention
ii. Building basic skills
iii. Encouraging acquisitions of domain-specific knowledge
iv. Stimulating and rewarding curiosity and exploration
v. Building motivation, especially internal motivation
vi. Encouraging confidence and a willingness to take risks
vii. Focusing on mastery and self-competition
viii. Promoting supportable beliefs about creativity
ix. Providing opportunities for choice and discovery
x. Developing self-management (metacognitive skills)
xi. Teaching techniques and strategies for facilitating creative performance
xii. Providing balance

Some see the conventional system of schooling as "stifling" of creativity and attempt (particularly in the pre-school/kindergarten and early school years) to provide a creativity-friendly, rich, imagination-fostering environment for young children.[161][162][163] Researchers have seen this as important because technology is advancing our society at an unprecedented rate and creative problem solving will be needed to cope with these challenges as they arise.[163] In addition to helping with problem solving, creativity also helps students identify problems where others have failed to do so.[161][162][164] See the Waldorf School as an example of an education program that promotes creative thought.

Promoting intrinsic motivation and problem solving are two areas where educators can foster creativity in students. Students are more creative when they see a task as intrinsically motivating, valued for its own sake. To promote creative thinking educators need to identify what motivates their students and structure teaching around it. Providing students with a choice of activities to complete allows them to become more intrinsically motivated and therefore creative in completing the tasks. hing students to solve problems that

do not have well defined answers is another way to foster their creativity. This is accomplished by allowing students to explore problems and redefine them, possibly drawing on knowledge that at first may seem unrelated to the problem in order to solve it.

Process of creativity

11. Preparation
12. Incubation
13. Illumination
14. Verification

Researcher Graham Wallis, many years ago, set down a description of what happens as people approach problems with the objective of coming up with creative solutions. He described his four-stage process as follows:

1. In the **preparation** stage, we define the problem, need, or desire, and gather any information the solution or response needs to account for, and set up criteria for verifying the solution's acceptability.

2. In the **incubation** stage, we step back from the problem and let our minds contemplate and work it through. Like preparation, incubation can last minutes, weeks, even years.

3. In the **illumination** stage, ideas arise from the mind to provide the basis of a creative response. These ideas can be pieces of the whole or the whole itself, i.e. seeing the entire concept or entity all at once. Unlike the other stages, illumination is often very brief, involving a tremendous rush of insights within a few minutes or hours.

4. In **verification**, the final stage, one carries out activities to demonstrate whether or not what emerged in illumination satisfies the need and the criteria defined in the preparation stage.

VALUES

Values can be defined as broad preferences concerning appropriate courses of action or outcomes. As such, values reflect a person's sense of right and wrong or what "ought" to be. "Equal rights for all", "Excellence deserves admiration", and "People should be treated with respect and dignity" are representative of values. Values tend to influence attitudes and behavior. Types of values include ethical/moral values, doctrinal/ideological (religious, political) values, social values, and aesthetic values. It is debated whether some values that are not clearly physiologically determined, such as altruism, are intrinsic, and whether some, such as acquisitiveness, should be classified as vices or virtues.

Types of values

We can speak of universal values, because ever since human beings have lived in community, they have had to establish principles to guide their behavior towards others. In this sense, honesty, responsibility, truth, solidarity, cooperation, tolerance, respect and peace, among others, are considered universal values.

However, in order to understand them better, it is useful to classify values according to the following criteria:

- **Personal values:**

These are considered essential principles on which we build our life and guide us to relate with other people. They are usually a blend of family values and social-cultural values, together with our own individual ones, according to our experiences.

- **Family values:**

These are valued in a family and iare considered either good or bad. These derive from the fundamental beliefs of the parents, who use them to educate their children. They are the basic principles and guidelines of our initial behavior in society, and are conveyed through our behaviors in the family, from the simplest to the most complex.

- **Social-cultural values:**

These are the prevailing values of our society, which change with time, and either coincide or not with our family or personal values. They constitute a complex mix of different values,
and at times they contradict one another, or pose a dilemma.

For example, if work isn't valued socially as a means of personal fulfillment, then the society is indirectly fostering "anti-values" like dishonesty, irresponsibility, or crime.

Another example of the dilemmas that social-cultural values may pose is when they promote the idea that "the end justifies the means". With this as a pretext, terrorists and arbitrary rulers justify violence, intolerance, and lies while claiming that their true goal is peace.

- **Material values:**

These values allow us to survive, and are related to our basic needs as human beings, such as food and clothing and protection from the environment. They are fundamental needs, part of the complex web that is created between personal, family and social-cultural values. If exaggerated, material values can be in contradiction with spiritual values.

- **Spiritual values:**

They refer to the importance we give to non-material aspects in our lives. They are part of our human needs and allow us to feel fulfilled. They add meaning and foundation to our life, as do religious beliefs.

- **Moral values:**

The attitudes and behaviors that a society considers essential for coexistence, order, and

general well being.

Characteristics:

Values may be specific, such as honouring one's parents or owning a home or they may be more general, such as health, love and democracy. "Truth prevails", "love thy neighbour as yourself, "learning is good as ends itself are a few examples of general values. Individual achievement, individual happiness and materialism are major values of modern industrial society.

Value systems can be different from culture to culture. One may value aggressiveness and deplores passivity, another the reverse, and a third gives little attention to this dimension altogether, emphasising instead the virtue of sobriety over emotionality, which may be quite unimportant in either of the other cultures. This point has very aptly been explored and explained by Florence Kluchkhon (1949) in her studies of five small communities (tribes) of the American south-west. One society may value individual achievement (as in USA), another may emphasise family unity and kin support (as in India). The values of hard work and individual achievement are often associated with industrial capitalist societies.

The values of a culture may change, but most remain stable during one person's lifetime. Socially shared, intensely felt values are a fundamental part of our lives. Values are often emotionally charged because they stand for things we believe to be worth defending. Often, this characteristic of values brings conflict between different communities or societies or sometimes between different persons.

Most of our basic values are learnt early in life from family, friends, neighbourhood, school, the mass print and visual media and other sources within society. These values become part of our personalities. They are generally shared and reinforced by those with whom we interact.

Importance and functions of values:

Values are general principles to regulate our day-to-day behaviour. They not only give direction to our behaviour but are also ideals and objectives in themselves. Values deal not so much with what is, but with what ought to be; in other words, they express moral imperatives. They are the expression of the ultimate ends, goals or purposes of social action. Our values are the basis of our judgments about what is desirable, beautiful, proper, correct, important, worthwhile and good as well as what is undesirable, ugly, incorrect, improper and bad. Pioneer sociologist Durkheim emphasised the importance of values (though he used the term 'morals') in controlling disruptive individual passions.

The main functions of values are as follows:

- Values play an important role in the integration and fulfillment of man's basic impulses and desires in a stable and consistent manner appropriate for his living.

- They are generic experiences in social action made up of both individual and social responses and attitudes.
- They build up societies, integrate social relations.
- They mould the ideal dimensions of personality and range and depth of culture.
- They influence people`s behaviour and serve as criteria for evaluating the actions of others.
- They have a great role to play in the conduct of social life.
- They help in creating norms to guide day-to-day behaviour.

LEARNINMG STYLES

Learning styles refer to a range of competing and contested theories that aim to account for differences in individuals' learning. These theories propose that all people can be classified according to their 'style' of learning, although the various theories present differing views on how the styles should be defined and categorised. A common concept is that individuals differ in how they learn.

David Kolb's model

David A. Kolb's model is based on his experiential learning model, as explained in his book *Experiential Learning*. Kolb's model outlines two related approaches toward grasping experience: *Concrete Experience* and *Abstract Conceptualization*, as well as two related approaches toward transforming experience: *Reflective Observation* and *Active Experimentation*. According to Kolb's model, the ideal learning process engages all four of these modes in response to situational demands; they form a learning cycle from experience to observation to conceptualization to experimentation and back to experience. In order for learning to be effective, Kolb postulated, all four of these approaches must be incorporated. As individuals attempt to use all four approaches, they may tend to develop strengths in one experience-grasping approach and one experience-transforming approach, leading them to prefer one of the following four learning styles:

- Accommodator = *Concrete Experience* + *Active Experiment*: strong in "hands-on" practical doing (e.g., physical therapists)
- Converger = *Abstract Conceptualization* + *Active Experiment*: strong in practical "hands-on" application of theories (e.g., engineers)
- Diverger = *Concrete Experience* + *Reflective Observation*: strong in imaginative ability and discussion (e.g., social workers)

- Assimilator = *Abstract Conceptualization* + *Reflective Observation*: strong in inductive reasoning and creation of theories (e.g., philosophers)

Kolb's model gave rise to the Learning Style Inventory, an assessment method used to determine an individual's learning style. According to this model, individuals may exhibit a preference for one of the four styles — Accommodating, Converging, Diverging and Assimilating — depending on their approach to learning in Kolb's experiential learning model.

Although Kolb's model is widely accepted with substantial empirical support and has been revised over the years, a 2013 study suggests that the Learning Style Inventory still "possesses serious weaknesses".

Peter Honey and Alan Mumford's model

Peter Honey and Alan Mumford adapted Kolb's experiential learning model. First, they renamed the stages in the learning cycle to accord with managerial experiences: *having* an experience, *reviewing* the experience, *concluding* from the experience, and *planning* the next steps.[11]:121–122 Second, they aligned these stages to four learning styles named:

- Activist
- Reflector
- Theorist
- Pragmatist

These four learning styles are assumed to be acquired preferences that are adaptable, either at will or through changed circumstances, rather than being fixed personality characteristics. Honey and Mumford's Learning Styles Questionnaire (LSQ) is a self-development tool and differs from Kolb's Learning Style Inventory by inviting managers to complete a checklist of work-related behaviours without directly asking managers how they learn. Having completed the self-assessment, managers are encouraged to focus on strengthening underutilised styles in order to become better equipped to learn from a wide range of everyday experiences.

A MORI survey commissioned by The Campaign for Learning in 1999 found the Honey and Mumford LSQ to be the most widely used system for assessing preferred learning styles in the local government sector in the UK.

Learning modalities

Walter Burke Barbe and colleagues proposed three learning modalities (often identified by the acronym VAK):

e) Visualising modality

f) Auditory modality

g) Kinesthetic modality

Barbe and colleagues reported that learning modality strengths can occur independently or in combination (although the most frequent modality strengths, according to their research, are visual or mixed), they can change over time, and they become integrated with age. They also pointed out that learning modality *strengths* are different from *preferences*; a person's self-reported modality preference may not correspond to their empirically measured modality strength. This disconnect between strengths and preferences was confirmed by a subsequent study.

Neil Fleming's VAK/VARK model

Neil Fleming's VARK model expanded upon earlier notions of sensory modalities such as the VAK model of Barbe and colleagues and the representational systems (VAKOG) in neuro-linguistic programming. The four sensory modalities in Fleming's model are:

i. Visual learning

ii. Auditory learning

iii. Read/write learning

iv. Kinesthetic learning

Fleming claimed that visual learners have a preference for seeing (visual aids that represent ideas using methods other than words, such as graphs, charts, diagrams, symbols, etc.).Auditory learners best learn through listening (lectures, discussions, tapes, etc.). Tactile/kinesthetic learners prefer to learn via experience—moving, touching, and doing (active exploration of the world, science projects, experiments, etc.). Students can use the model to identify their preferred learning style and, it is claimed, maximize their learning by focusing on the mode that benefits them the most. Fleming's model also posits two types of multimodality.

Anthony Gregorc's model

Anthony Gregorc and Kathleen Butler organized a model describing different learning styles rooted in the way individuals acquire and process information differently. This model posits that an individual's perceptual abilities are the foundation of his or her specific learning strengths, or learning styles.

In this model, there are two perceptual qualities: *concrete* and *abstract*, and two ordering abilities: *random* and *sequential*. Concrete perceptions involve registering information through the five senses, while abstract perceptions involve the understanding of ideas, qualities, and concepts which cannot be seen. In regard to the two ordering abilities, sequential ordering involves the organization of information in a linear, logical way, and random ordering involves the organization of information in chunks and in no specific order. The model posits that both of the perceptual qualities and both of the

ordering abilities are present in each individual, but some qualities and ordering abilities are more dominant within certain individuals.

CLASSROOM APPLICATION

Although learning styles will inevitably differ among students in the classroom, Dunn and Dunn say that teachers should try to make changes in their classroom that will be beneficial to every learning style. Some of these changes include room redesign, the development of small-group techniques, and the development of "contract activity packages".[40] Redesigning the classroom involves locating dividers that can be used to arrange the room creatively (such as having different learning stations and instructional areas), clearing the floor area, and incorporating student thoughts and ideas into the design of the classroom.[40]

Dunn and Dunn's "contract activity packages" are educational plans that use: a clear statement of the learning need; multisensory resources (auditory, visual, tactile, kinesthetic); activities through which the newly mastered information can be used creatively; the sharing of creative projects within small groups; at least three small-group techniques; a pre-test, a self-test, and a post-test.[40]

SOCIOCULTURAL DIFFERENCES

Definition

Sociocultural approaches to understanding differences in health call attention to the roles of and potential interdependence between social and cultural factors for health outcomes.

Cultural attitudes, beliefs, values, history, and systems of knowledge are interdependent with the social environment that includes economic status, community and family systems, and interpersonal relationships. Together, sociocultural factors may impact health in numerous ways, such as influencing access/barriers to health care and service utilization preferences/patterns as well as affecting health behaviors such as diet and exercise. A set of beliefs, customs, practices and behavior that exists within a po pulation.

International companies often include an examination of the socio cultural environment prior to enteri ng their target markets.

Types of Learning Disabilities

Learning disabilities are neurologically-based processing problems. These processing problems can interfere with learning basic skills such as reading, writing and/or math. They can also interfere with higher level skills such as organization, time planning, abstract reasoning, long or short term memory and attention. It is important to realize that learning disabilities can affect an individual's life beyond academics and can impact relationships with family, friends and in the workplace.

Since difficulties with reading, writing and/or math are recognizable problems during the school years, the signs and symptoms of learning disabilities are most often diagnosed during that time. However, some individuals do not receive an evaluation until they are in post-secondary education or adults in the workforce. Other individuals with learning disabilities may never receive an evaluation and go through life, never knowing why they have difficulties with academics and why they may be having problems in their jobs or in relationships with family and friends.

Learning disabilities should not be confused with learning problems which are primarily the result of visual, hearing, or motor handicaps; of mental retardation; of emotional disturbance; or of environmental, cultural or economic disadvantages.

Generally speaking, people with learning disabilities are of average or above average intelligence. There often appears to be a gap between the individual's potential and actual achievement. This is why learning disabilities are referred to as "hidden disabilities": the person looks perfectly "normal" and seems to be a very bright and intelligent person, yet may be unable to demonstrate the skill level expected from someone of a similar age.

A learning disability cannot be cured or fixed; it is a lifelong challenge. However, with appropriate support and intervention, people with learning disabilities can achieve success in school, at work, in relationships, and in the community.

In Federal law, under the Individuals with Disabilities Education Act (IDEA), the term is "specific learning disability," one of 13 categories of disability under that law.

"Learning Disabilities" is an "umbrella" term describing a number of other, more specific learning disabilities, such as dyslexia and dysgraphia. Find the signs and symptoms of each, plus strategies to help below.

causes of learning disabilities

A learning disability happens when a person's brain development is affected, either before they are born, during their birth or in early childhood.

Several factors can affect brain development, including:

i. the mother becoming ill in pregnancy

ii. problems during the birth that stop enough oxygen getting to the brain

iii. the unborn baby developing certain genes

iv. the parents passing certain genes to the unborn baby that make having a learning disability more likely (known as inherited learning disability)

v. illness, such as meningitis, or injury in early childhood

Sometimes there is no known cause for a learning disability.

Some conditions are associated with having a learning disability, such as cerebral palsy. This is because people with these conditions are more likely to have one.

Everyone with Down's syndrome, for example, has some kind of learning disability, and so do many people with cerebral palsy. People with autism may also have learning disabilities, and around 30% of people with epilepsy have a learning disability.

Specific Learning Disabilities

Auditory Processing Disorder (APD)

Also known as Central Auditory Processing Disorder, this is a condition that adversely affects how sound that travels unimpeded through the ear is processed or interpreted by the brain. Individuals with APD do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard. They can also find it difficult to tell where sounds are coming from, to make sense of the order of sounds, or to block out competing background noises.

Dyscalculia

A specific learning disability that affects a person's ability to understand numbers and learn math facts. Individuals with this type of LD may also have poor comprehension of math symbols, may struggle with memorizing and organizing numbers, have difficulty telling time, or have trouble with counting.

Dysgraphia

A specific learning disability that affects a person's handwriting ability and fine motor skills. Problems may include illegible handwriting, inconsistent spacing, poor spatial planning on paper, poor spelling, and difficulty composing writing as well as thinking and writing at the same time.

Dyslexia

A specific learning disability that affects reading and related language-based processing skills. The severity can differ in each individual but can affect reading fluency, decoding, reading comprehension, recall,

writing, spelling, and sometimes speech and can exist along with other related disorders. Dyslexia is sometimes referred to as a Language-Based Learning Disability.

Language Processing Disorder

A specific type of Auditory Processing Disorder (APD) in which there is difficulty attaching meaning to sound groups that form words, sentences and stories. While an APD affects the interpretation of all sounds coming into the brain, a Language Processing Disorder (LPD) relates only to the processing of language. LPD can affect expressive language and/or receptive language.

Non-Verbal Learning Disabilities

A disorder which is usually characterized by a significant discrepancy between higher verbal skills and weaker motor, visual-spatial and social skills. Typically, an individual with NLD (or NVLD) has trouble interpreting nonverbal cues like facial expressions or body language, and may have poor coordination.

Visual Perceptual/Visual Motor Deficit

A disorder that affects the understanding of information that a person sees, or the ability to draw or copy. A characteristic seen in people with learning disabilities such as Dysgraphia or Non-verbal LD, it can result in missing subtle differences in shapes or printed letters, losing place frequently, struggles with cutting, holding pencil too tightly, or poor eye/hand coordination.

IMPLICATIONS

- Take charge of your child's education
- Identify how your child learns best
- Think life success, rather than school success
- Emphasize healthy lifestyle habits
- Take care of yourself, too